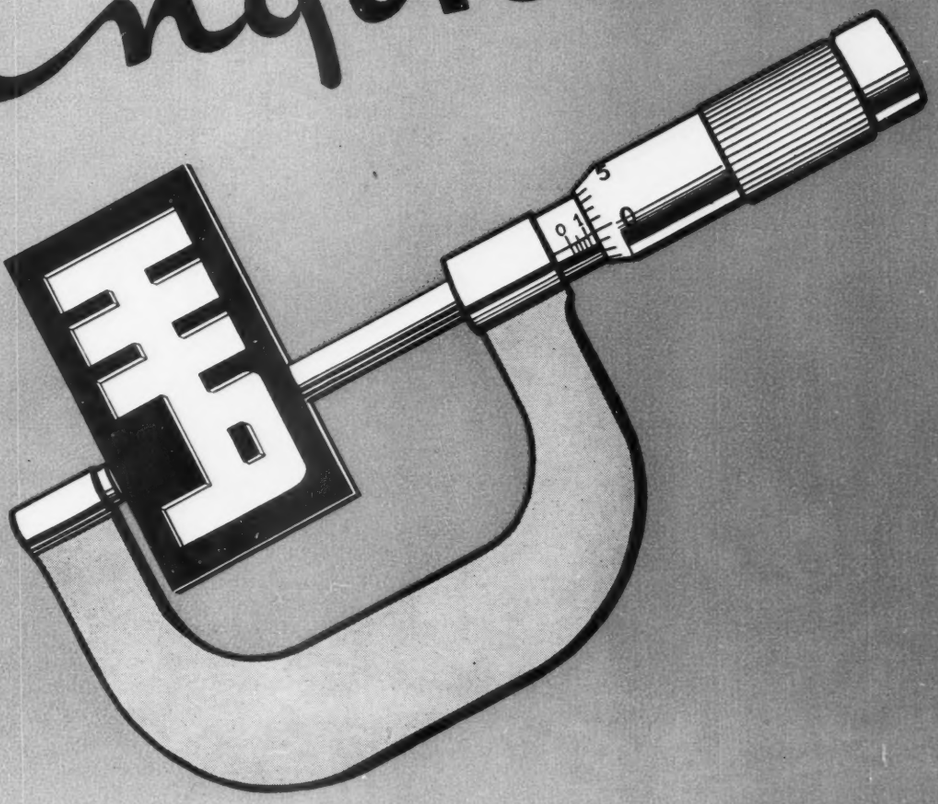
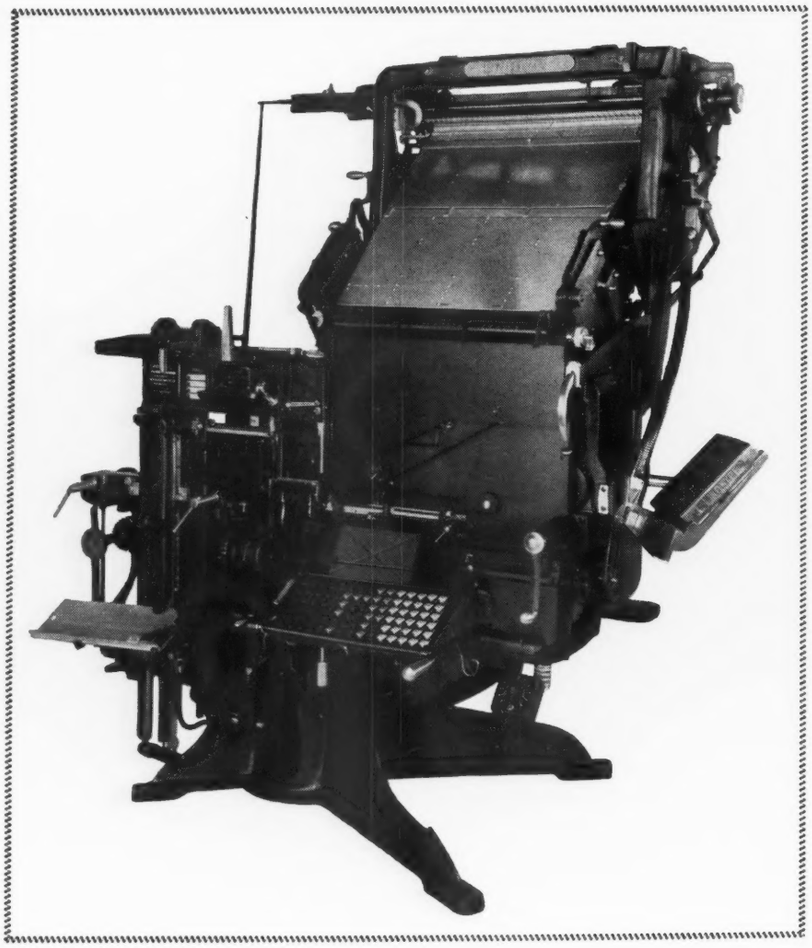
Printing Equipment Engineer



AUGUST, 1940

A TECHNICAL PUBLICATION FOR PRODUCTION AND MECHANICAL EXECUTIVES IN THE GRAPHIC ARTS INDUSTRY

CAPACITY!



2-in-1 Model 33 Unparalleled capacity and flexibility is the keynote of this newest member of the Blue Streak Linotype Family. Its four magazines are all 35% wider than standard, and they may have either 72 or 90 channels. This means that sizes from 5 point through 36*point can be keyboarded with equal ease. Any combination of magazines can be used—change them as much or as frequently as desired—it's all the same to the Model 33 Two-in-One Linotype.

*Magazine capacity: 90-chan. through normal 24 point, 72-chan. through normal 36 point.

Added to the extraordinary magazine equipment of this new single-distributor extra-range Linotype are companion features which make it as easy to handle as any straight text machine.

A Variable Speed Assembler has been designed to assure smooth, transposition-free assembly of all matrix sizes; the wide magazines are shifted by the famous One-Turn-Shift; magazines are readily changed because of their Linolite construction and the exclusive Linotype Vertical-Lift Changing Mechanism, which permits magazine to be held in convenient position for removal or replacing.

To effect further flexibility, combinations of 72- and 90-channel magazines may be quickly varied with the aid of Linotype's simple Channel Chooser.

Naturally this new Blue Streak has all the other exclusive Linotype features, and may be equipped with Micro-Therm Electric Pot, Self-Quadder, Six-Mold Disk and Thermo-Blo.

For economical display composition, or text and display composition, the 2-in-1 Model 33 introduces unprecedented capacity, as well as easy, simple, operation.

LINOTYPE

Linotype Electra Bold and Bodoni Bold

TRADE LINOTYPE MARK

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Los Angeles (Calif.) . . . . Herald & Express
Boston (Mass.) . . . . . Herald-Traveler (4)
Pittsfield (Mass.) . . . . . Berkshire Eagle
Syracuse (N.Y.) . . . . . Herald-Journal
Akron (Ohio) . . . . . Beacon-Journal
Omaha (Neb.) . . . . . World-Herald
Buffalo (N.Y.) . . . . Evening News
Portland (Ore.) . . . . . Oregonian
Canton (Ohio) . . . . Repository
Superior (Wis.) . . . Telegram
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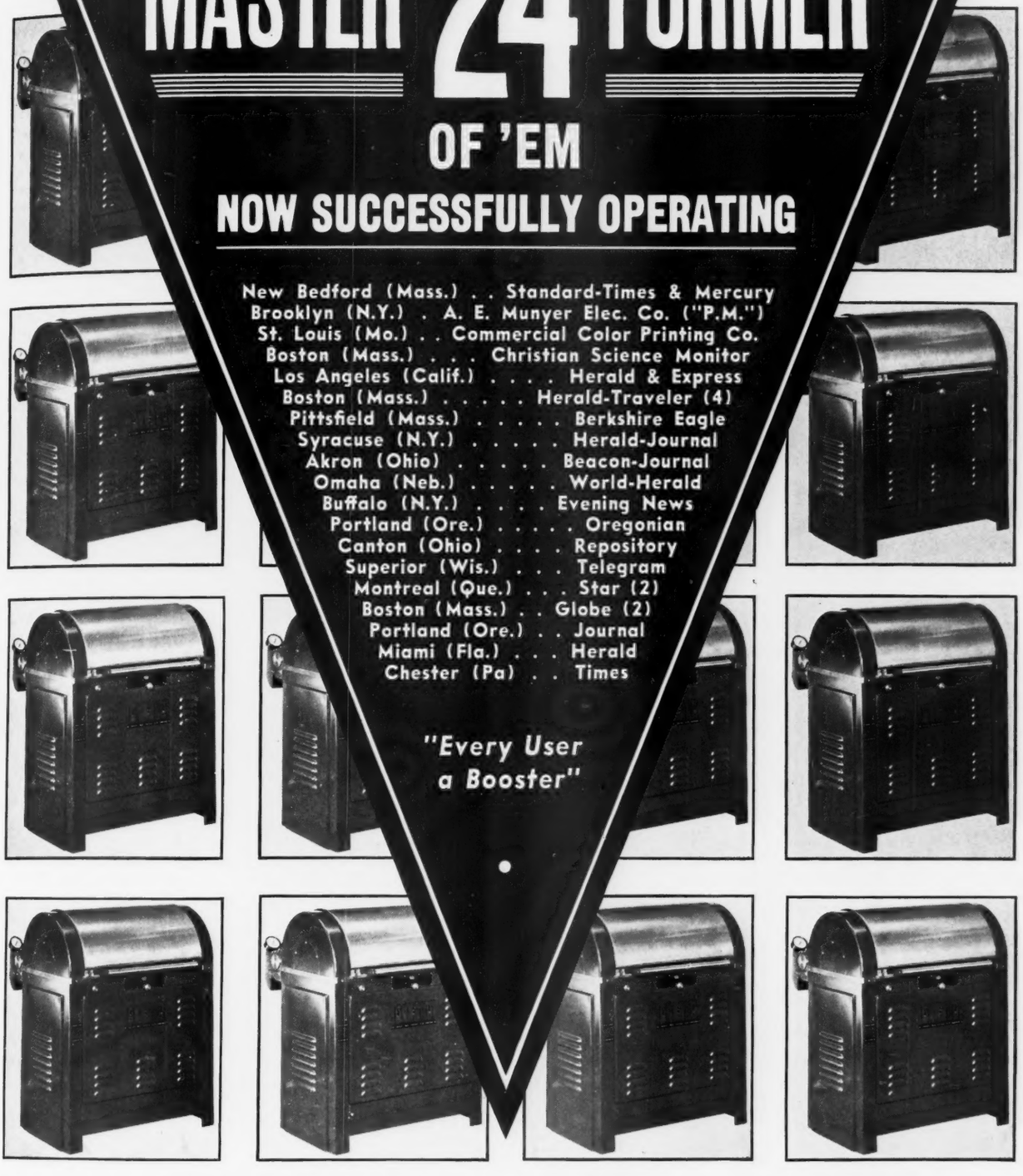

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BOOKS
RECEIVED

Print

THE chief optical impression of the first issue of *Print* is its elegance — quiet elegance, if you please, without freakish effects. Its 7¼ in. by 10 in. size with ample page margins and sewn binding make it look and feel like a companionable book. The type pages set in Linotype's Caledonia, 30 pica measure, are readable without eyestrain, and by the way, since he has preached readability consistently, we would like to have Douglas C. McMurtrie's valued appraisal of *Print's* typography from the reader viewpoint.

The mental impression one receives from *Print's* context is extremely agreeable. Its editorial range is wide. *Since Gutenberg* by Carl P. Rollins, leading off the issue is another of the wealth of articles written in commemoration of three important printing anniversaries. *The Five Hundred Years — a Time-Problem and Its Solution*, is a phantasy in which W. A. Dwiggins writes in a period 500 years in the future, at a time when the lost art of printing is rediscovered. The period has witnessed destruction of the printing art (in 1979) by the luxigraf (a photo-typesetting machine). Luxigrafing had a several-hundred-year vogue. The author's inference is that during this period composition became more and more unreadable because "the letters became thicker and blacker and cramped together sidewise in an effort to get as many of them as possible upon a single leaf," so that luxigrafing passed out. Communications after that time were recorded on a spool of "platinum alloyed wire with 16% of a metal not on our list of elements." The wire carried a magnetized recording system which the author reproduces in sound.

To readers of *Printing Equipment Engineer*, perhaps *Wallpaper — Tradition Holds a Fort* by Edward S. Bartlett and *Textbook Design — A Study in Missed Opportunities* by L. J. Ansbacher, will be of prime interest. In the former article Mr. Bartlett points out that because of the consuming public's preference, the wallpaper industry glories in a technique which has made little change in over a century. The article is semi-historical and partly deals with present-day wallpaper production methods.

Mr. Ansbacher's article is a bluntly-worded argument in favor of progressive design in textbook publication. There isn't the least doubt but what the author is sincere in a desire to see improved book typography, illustration, binding and design. After reading the article, we conclude that while the author uses the needle somewhat forcibly in expressing his criticisms, the opinions are his, and that after all some of his suggestions may find acceptance, especially among those publishers charged by the author with "defeatism" in progressive textbook design. We would have appreciated reading the writer's comments about *all* machine composition methods used in book production. The critique is incomplete.

Some of the other articles include: *Education In a Workshop*, by Ray Nash; *Saks Fifth Avenue Advertising*, by Ruth Fleischer; *Illustrated Books of the Sixties*, by Edwin De T. Bechtel; and *Prints and Print Making*, by John Taylor Arms.

All of the principal printing processes were used in producing *Print*. Collotype by Meriden Gravure Co.; offset-lith by Boston Banknote Co.; intaglio by Photogravure & Color Co.; all of the letterpress by William E. Rudge's Sons, Inc., New York.

**Print*, published quarterly by William Edwin Rudge. Subscription, $5 per year. Editorial and Business Office, P.O. Box 1893, 424 Temple St., New Haven, Conn.

Splendid Souvenir Book

DETROIT Stereotypers Union No. 9 and Electrotypers Union No. 54 jointly entertained the 39th annual convention of the International Stereotypers' and Electrotypers' Union of North America at the Book-Cadillac Hotel, Detroit, on July 15-20.

This rather long sentence is by way of telling you that a splendid souvenir book was issued in celebration of the event by Detroit stereotypers and electrotypers.

The book is 9⅛ in. by 12⅛ in., and consists of 96 spiral-bound pages and cover. Cover is printed in blue and gold inks.

The book is copiously illustrated and contains many articles pertinent to the trade. The book also was well patronized by equipment and suppliers to the industry and by the various local unions throughout the jurisdiction.

All of the art and editorial matter was handled by members of the Detroit union. A. J. Ferland, a Detroit *Free Press* stereotyper, designed the cover, bleed strips in silhouette at the bottom of the pages and the design of several special layouts.

Book Editor A. R. Jamieson of the Detroit *News* stereotype department, designed the editorial section, head writing, composite picture layout and made up the dummy of the 96 page book for the printer.

The typography and presswork are excellent.

Will Feature Exhibit

THE 54th Annual Convention of the United Typothetae of America, to be held at the Mayflower Hotel, Washington, D. C., October 7, 8 and 9, will feature an Equipment, Supply and Materials Exhibit. This is the first time that such an opportunity has been afforded equipment manufacturers, paper, ink, roller, and other suppliers, to put on such a display at an annual U.T.A. Convention.

Speaking of the exhibit, B. B. Eisenberg, President of the United Typothetae of America states: "This exhibit is not intended to be a showing of heavy machinery such as was displayed at the regular Graphic Arts Expositions, but is rather an exhibit of the progress that has been made in the past year since the New York Show, together with information as to equipment and materials available in reducing costs, increasing production, utilizing new processes, and determining new uses of printing."

Tempo Heavy Condensed

Tempo Heavy Condensed, announced some time ago as being in process of manufacture in sizes from 10 to 72 point by the Ludlow Typograph Company, is now ready in most sizes.

Tempo Heavy Condensed is for use in spaces of restricted size and for advertising typography, commercial printing and as a newspaper headletter face.

Specimen sheets showing all sizes of Tempo Heavy Condensed may be obtained on request from the Ludlow Typograph Company.

1940 Carnegie Tech Graduates Placed

The Department of Printing at the Carnegie Institute of Technology, Pittsburgh, Pa., announces the names of this year's graduates and the firms with whom they have secured positions. These are as follows:

GRADUATE:	PLACEMENT:
John D. Andrews, Shaker Heights, O.	The Andrews Cartage Co., Cleveland, O.
Edward Britt, Lexington, Ky.	Case-Hoyt Corp., Rochester, N. Y.
John R. Burke, Pittsburgh, Pa.	Publishers Printing Co., New York, N. Y.
Harold E. DeKorp, New York, N. Y.	Chicago Mail Order Co., Chicago, Ill.
Herbert J. Fair, Callicoon, N. Y.	Lenz and Reicker, New York, N. Y.
Ronald D. Dumbert, Siegel, Pa.	U. S. Steel Corp., Pittsburgh, Pa.
Donald J. Inrig, Pittsburgh, Pa.	Columbia Printing Co., Chicago, Ill.
Bernard Lebovit, Bayonne, N. J.	Harry J. Lebovit, Bayonne, N. J.
Jack Lee, Ellsworth, Pa.	Publishers Printing Corp., New York, N. Y.
James L. Lee, Grand Haven, Mich.	Challenge Machinery Co., Grand Haven, Mich.
Morris Lomaskin, Rigo Park, L. I., N. Y.	The Georgian Press, New York, N. Y.
Herbert C. May, Houston, Texas	May Printing Co., Houston, Texas
Russell E. McLean, Somers, Conn.	U. S. Envelope Co., Springfield, Mass.
James N. Moore, Pittsburgh, Pa.	Horton Printing Co., Meriden, Conn.
Eugene A. Musial, East Vandergrift, Pa.	Wisconsin-Cuneo Press, Milwaukee, Wis.
Phillips N. Piper, Detroit, Mich.	Rand-McNally Co., Chicago, Ill.
Harold Quell, Stewart Manor, N. Y.	Case-Hoyt Corp., Rochester, N. Y.
Charles B. Russell, New York, N. Y.	University of Nebraska Press, Lincoln, Neb.
Vern W. Schilawske, Detroit, Mich.	Keller-Crescent Co., Evansville, Ind.
W. Mark Shaw, Rochester, N. Y.	West Penn Power Corp., Pittsburgh, Pa.
George E. Shearer, Wilkinsburg, Pa.	United Autographic Register Co., Chicago, Ill.
John A. Stanley, Bellevue, Pa.	Baughman Stationery Co., Richmond, Va.
John R. Sutherland, Butler, Pa.	Eagle Printing Co., Butler, Pa.
Robert E. Wood, Clifton, N. J.	A. A. Watts Co., New York, N. Y
Roger A. Newberger, White Plains, N. Y.	Application Pending

ANNOUNCING

Radiant Bold

—a versatile typeface

There is nothing commonplace about Radiant Bold—the newest member of the Ludlow Radiants. Its incisive design awakens interest. Its emphatic weight rivets attention. Its range of possibilities is almost infinite, for Radiant Bold is always in good taste for composition of modern style, a truly versatile and practical typeface.

● Radiant Bold has an individuality of its own, in addition to sharing the characteristics common to all the Radiants. This individuality, apparent in each member, multiplies many times the usefulness of the whole family.

● The Radiants are coming to be looked upon by many typographers as the most useful of modern typeface families, destined to become the "third universal modern typeface." In point of modern design, legibility, and brilliance, the Radiants offer well-defined advantages over the two other modern typefaces of proven worth the ever-popular monotone sans-serif and the flat-serif faces.

● Simplified by elimination of serifs, yet with the legibility value of a distinct variation in weight of stroke, the Radiants are brilliantly executed and at the same time highly readable.

● Ludlow is proud to present this original modern typeface family, now represented by Radiant Medium, Radiant Bold, Radiant Heavy and Radiant Bold Extra Condensed, a few sizes of each which are shown in the column at the right. Specimen sheets showing the full size-range will be sent on request.

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bargain sale
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AIR FORCE TO
call more men
30 point

SORTS PROBLEM
solved by printers
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NEW TYPEFACES FOR
better quality printing
18 point

Other members of the Ludlow Radiant family

TIME IS SAVED
with the Ludlow
Ludlow Radiant Medium

A LARGE ARRAY OF NEWER
and more legible typefaces
Ludlow Radiant Bold Extra Condensed

BETTER ADS
bring in sales
Ludlow Radiant Heavy

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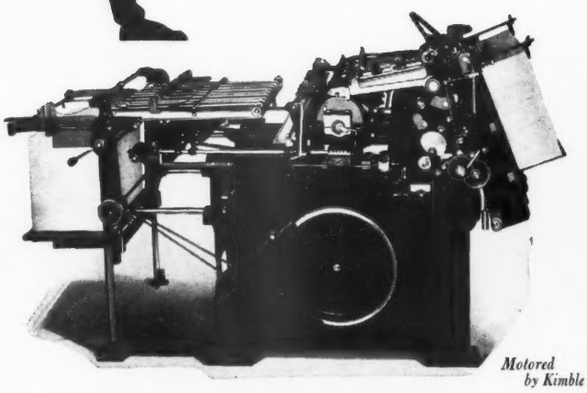
The LITTLE GIANT has the powerful ability to carry the profit load on short runs and give you low cost production. That's why it's America's fastest selling cylinder press... not just another cylinder press. It's small, yes... but large enough to print the popular commercial sizes 11x17 one-up and 8½x11 two-up... plus bleed... at speeds up to 3500 an hour! And so completely accessible and simple to operate that changes for imprinting can be made quickly and easily with a minimum of production time lost! In fact, the Little Giant has many features found only on larger presses... and one of the lowest hour costs of *any* cylinder press regardless of size. Ask your ATF Salesman or Agent for a Little Giant press sheet.



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- ESTIMATING GRAPHS FOR PRINTERS—*By Fred W. Hoch.* Bound in 16-page, 8½ in. by 11 in. size, printed on heavy white paper. Simple, concise method of figuring accurate production costs based on economic industry cost values. Graphs are based on cost values to which is added fair profit before quoting selling prices. $3 per copy, cash with order.
- PHOTOGRAVURE — *By H. Mills Cartwright.* Covers all of photogravure's basic principles in concise and readable language. Rotogravure receives minor discussion but this is generally considered best textbook on photogravure process. Contains 202 pages, 34 illustrations, maroon cloth, size 6¼ in. by 9¼ in., $3.50 per copy, cash with order.
- TIPS ON PRESSWORK — *By G. C. Cooper.* This pocket size book measures 3½ in. by 5½ in. and contains 111 printed pages, heavy paper cover. Covers standard practices on cylinder and platen presses. Price $1.50, cash with order.
- ENCYCLOPEDIA OF LITHOGRAPHY — *Compiled by Russell L. Miles.* Besides technical information about all details of offset-lith set forth in simple language, this book contains discussions on various phases of offset-lith by well known writers. Bound in blue cloth, gold stamping. Illustrated. Size 6 in. by 9¼ in., 212 pages. Price $4.50 per copy, cash with order.

ETCH PROOFS — *By J. H. Bartz.* Booklet, approx. 6 in. by 9 in. 40 pages and paper cover. Tells reasons for and how to take reproduction proofs. Price, $2.00, cash with order.

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LEADING ARTICLES

AUGUST, 1940

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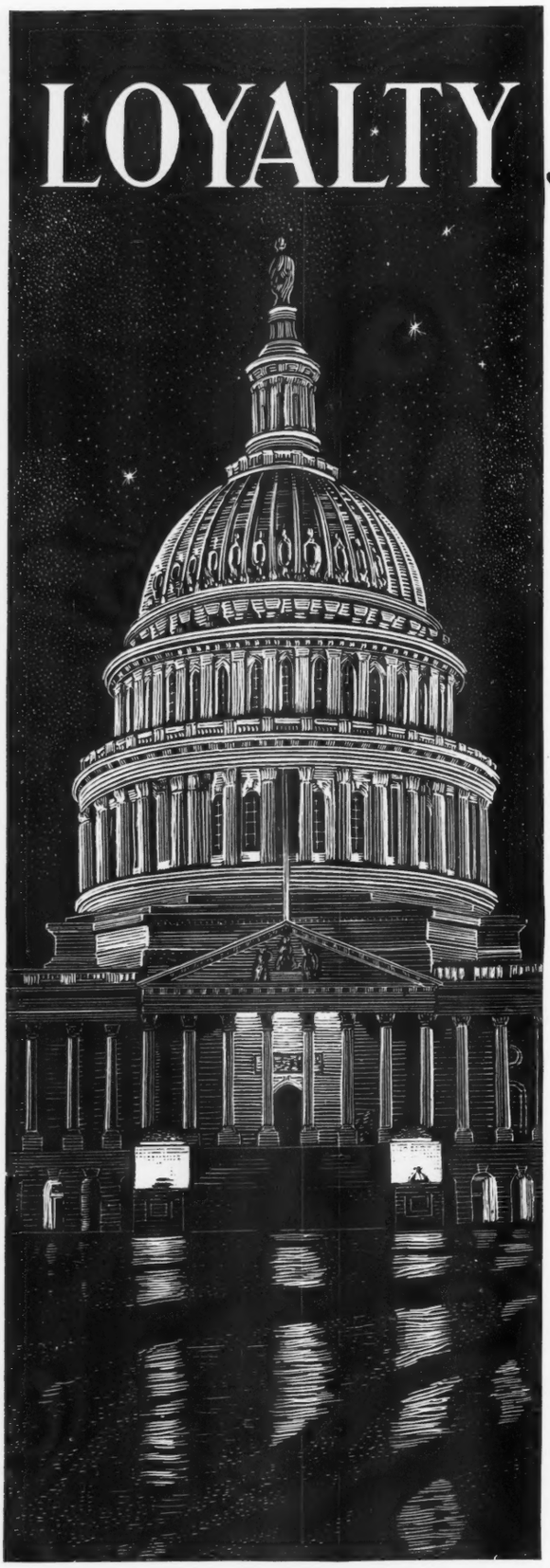

LOYALTY *strength of a Nation*

depends not only upon reverence of the people for their government but also upon the government's esteem for the wishes of its citizens.

In business relations, companies, which owe their existence to the loyalty of their customers, are obligated to *earn* that respect by faithfully performing the services desired of them.

The thousands of customers who have remained constant to Ideal products over a period of many years appreciate that fidelity is not a one-sided affair.

Ideal products have steadily improved through observance of the needs and wishes of roller users. Our policy has always been to supply the very best products possible. Old and faithful customers *are still using* Ideal products, knowing them to be the very best available, although our improved types of materials now bear little resemblance to their predecessors.

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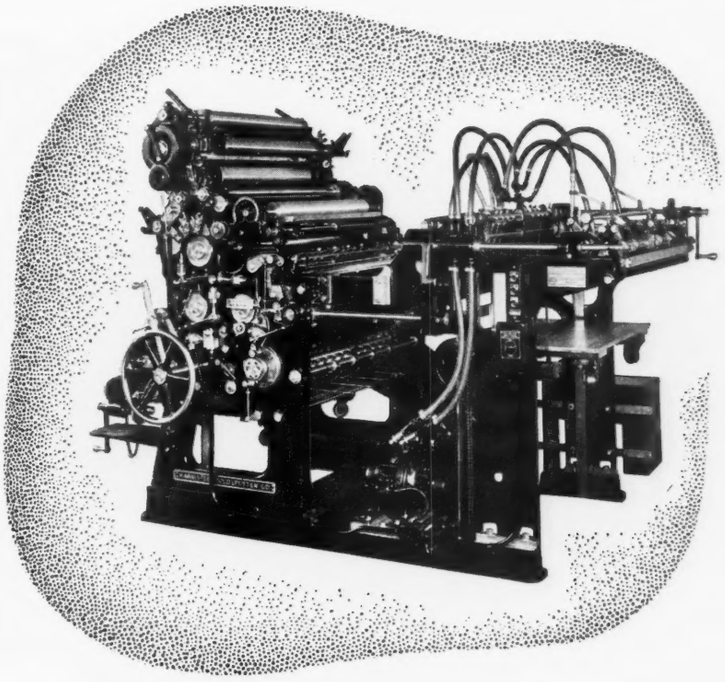

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Harris Presses, made by the pioneers in the offset field, offer you every advantage for every printing opportunity—with a size and type press best suited to every pressroom need.

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Can YOU figure both jobs?

Get the profits from the ***extra*** *work offset affords*

From everywhere comes evidence that printshops which have good letterpress equipment, *supplemented by efficient offset equipment,* are running far ahead of straight letterpress competition. The reasons are obvious:

1. With letterpress printing showing a good 15% gain*, and offset printing running ahead as much as 40%*, the printer with both letterpress and offset equipment is gaining in *both* directions.
2. Since a large share of the offset volume is purchased by buyers of letterpress printing, the printer with both kinds of equipment can get *both* classes of work from his regular customers.
3. With many of today's buyers of printing favoring the shop that offers a complete service, the printer with both letterpress and offset equipment can get the "lion's share" of the work.

*From latest U. S. Census of Manufactures Figures.

In other words, only the printer who can offer *both* letterpress and offset printing is equipped to "cash in" on the opportunities offset affords. *And it's a real opportunity,* since much of the offset volume is in addition to, and not at the expense of, letterpress printing. • Why not take full advantage of it? The complete story on offset will interest every letterpress printer. Ask your ATF Salesman to give you all the facts.

Ask **ATF** . . . nowhere else can you get everything from precision cameras to high-speed sheet and web offset presses . . . as well as bindery equipment and experienced engineering layouts. Only ATF can give you both . . . complete offset and letterpress. *Ask* ATF!

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also makes Type,
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Types used: Bulmers, Balloons and Ultra Bodonis

NEW INTERNATIONAL CRAFTSMEN'S OFFICERS

Front row (left to right): Treasurer, Charles W. Gainer of the Chicago Club; Secretary, L. M. Augustine of the Baltimore Club who was elected for the twenty-first consecutive time; President, Frank McCaffrey of the Seattle Club; First Vice President, Eric O'Connor of the Montreal Club. Rear row (Left to right): Chairman of Publications Commission Haywood Hunt of the San Francisco Club; Immediate Past President John M. Callahan; Douglas C.Mc Murtrie, who has functioned so efficiently as Chairman of the 500th Anniversary of Printing Committee and who will be a member of President McCaffrey's official family.

Unfortunately, it was not possible for two of the new international officers to be present at the San Francisco convention. These were: Second Vice President-elect Elmer C. Voigt of the Milwaukee-Racine Club, and Third Vice President-elect Harvey Glover of the New York Club.

Craftsmen's Convention *in San Francisco has 650 registration — Educational and technical program conducted successfully.*

By JOHN COBB, RICHARD H. TEMPLETON, Jr., and ANDREW GEORGE

WITHOUT qualification, the Twenty-first International Craftsmen's convention held at the Palace Hotel in San Francisco on August 4 to 8, was successfully consummated from every angle. The educational program consisted entirely of clinics devoted to particular phases of the printing industry. The clinics were not run off simultaneously but were held successively. The clinics, six in number, were held twice a day three days in succession. These were devoted to Photo-engraving and Electrotyping, Typography, Letterpress Presswork, Offset-Lith, the Bindery and a New Developments Clinic.

Approximately 650 Craftsmen delegates and their ladies registered.

The following officers were elected for the coming year: President, Frank McCaffrey of Seattle, Wash.; First Vice President, Eric O'Connor of Montreal; Second Vice President, Elmer C. Voigt of the Western Printing & Litho. Co., and member of the Milwaukee-Racine Club of Printing House Craftsmen; Third Vice President, Harvey Glover of the Sweeney Lithograph Co., and member of the New York Club; L. M. Augustine, Baltimore, was elected secretary for the 21st consecutive time; Charles W. Gainer of the Chicago Club, was elected treasurer.

Baltimore was selected for the 1941 convention city.

PLATEMAKING CLINIC

Philip J. McAteer introduced Edmund F. Russ as chairman of the Photo-engraving and Electrotyping Clinic, held on Monday morning. Mr. Russ prefaced his remarks by stating it was fitting that the clinics should begin with a discussion of photo-engraving and electrotyping because they were the beginnings of letterpress printing. In Mr. Russ's opinion photo-engraving will not be continued as the champion of the Graphic Arts unless steps are taken to correct some of the situations which exist at present. He felt it was up to the letterpress industry to develop a technique whereby finer line screens could be printed.

Web. Harrison of Seattle, Wash., addressed the clinic on the subject: *What's New in Photo-engraving Processes.* There are a great many things going on in the photo-engraving field. Some of these new developments may turn out to be extremely important, some may not, time alone will tell. This year marks the 500th anniversary of the invention of printing from movable types. However, the photo-engraving industry is less than 50 years old. Like a baby, this industry is having trouble in "standardization." A baby's first effort at feeding itself is an attempt to standardize a process. He likened such efforts to standardization of the photo-engraving industry.

Three items enter into the making of photo-engravings, Methods, Metals, and Equipment. There has been quite a bit of work done on printing directly from zinc plates of 0.035 in. and 0.045 in., which have been mounted on stereo or steel base. Mr. Harrison stated that in Seattle a newspaper had had consider-

able success printing directly from 85 line screen zinc plates in this manner.

In the speaker's opinion there is an unexplored future in the printing from thin plates on rotary presses. In the flat-bed field there is an increasing use of 11 point zinc and copper for use on patent base. This holds true particularly in the label field.

A new metal has been developed which combines the etching qualities of copper with the speed of zinc. It is very likely that this metal will see rapid development in the near future.

In the equipment field, Mr. Harrison predicted an increasing use of plant cameras which utilize film. Because of the advantages of this type of camera over the wet plate type, it was his opinion that they would become standard in the industry.

Another new development in the industry is the Densitometer, an instrument which gives the operator a definite measure for the density of negatives. This type of instrument is a definite step forwards because it eliminates the guesswork of the individual operator. Mr. Harrison expressed the sentiment that it was imperative to eliminate as much hand work from the various steps in photo-engraving as possible. "In the future," said he, "the etcher who touches a plate with his hands will be fired."

Electrotyping

Philip J. McAteer spoke on the new developments in electrotyping. In the speaker's opinion very satisfactory controls had been developed in the field of nickeltyping. However chromium plating requires different techniques, and for that reason it is best to refer these problems to the specialists in this field outside of the industry. The main advantage of chromium plates is greater wear. Tests have indicated that a chromium surfaced plate will wear 2¼ times longer than a nickeltype. From all observations ink consumption is about equal.

Several years ago Mr. McAteer felt that electrotyping was a dying business. However, he does not feel that way at the present time due to new developments in the letterpress field. He feels that there are some things that are done better by offset than by letterpress, but there is still plenty of room for the progressive letterpress printer. He cited the case of the recently produced and copiously illustrated Sherwin-Williams book, which was produced at a cost of $250,000 for 10,000 copies. In his opinion this was the "best book of the year," and it was printed letterpress.

He pointed out that one of the greatest fallacies in letterpress meeting offset competition is to cut prices. Letterpress should meet this competition by installing modern high-speed equipment, employ greater efficiency in plant management, and by standardization of ink, paper, etc. Through these means prices can be legitimately reduced, and high standards of quality can still be maintained.

A new development in the electrotyping field that has a bright future is the silver spray which eliminates the necessity of wet leading cases preparatory to hanging in the tanks.

Plastic Plates

George Russell Reed, Jr., spoke on the subject of *Plastic Printing Plates*.

There are two types of plastic printing plates, "thermo setting," and "thermo plastic." The former are made from phenol-foraldehyde and phenol-furferal resin. The latter are made from cellulose acetate and vinyl acetates. The chief objection to the plastic material lies in the fact that when cold, the material will move under frictional heat and pressure, which in time destroys the sharpness of the letter edge and dot formation in the printing plate. For this reason the Econo Products, Inc. of Rochester, who are among the foremost organizations working on printing plastics development, use the thermo-setting group. This type of material reacts completely under heat and pressure, and produce a plate which is not changed except by wear on the press.

The thermo-setting type of materials require that the matrix be coated with a parting medium of some kind, in order to separate the matrix from the plate. One of the biggest problems in making thermo-setting plates is curling of the plate. A great deal of research is now being done to eliminate this.

As a rule, ink will transfer better from a plastic plate than from a metal plate. The plate itself is harder than a metal plate, and the material lends itself to easy routing. About the same amount of makeready is required, and plate mounting is the same as with metal plates.

Mr. Reed told about an experiment in which a finished plastic plate was put through a regular dry mat roller with the usual pressure of 0.152 in. between the roller and the plate; then on subsequent tests the space set at 0.130 in., 0.120 in., 0.100 in., and finally 0.0625 in., using a cork molding blanket. Examination showed there was no change in the height of the plate after these tests, nor in its printing surface, which demonstrates the remarkable resiliency of a plastic plate.

The speaker felt the future of plastic plates is very bright, and that these plates would be turned out faster and cheaper than electrotypes. However, he also pointed out there still are a lot of problems to be solved in this field.

Gradie Oakes, of Chicago, handled the subject of *Molded and Cut Rubber Plates*. He outlined the development of the rubber industry, pointing out that the first patents on a rubber plate were issued in 1839. However it was not until the Jean Berte patents were issued in 1926 that the printers of this country really became aware of the advantages of this type of plate. In water color printing, rubber plates did by far the best job.

However, when these rubber plates were used with linseed varnish inks, difficulties were encountered, which meant further research for the makers of rubber plates.

In the making of cut rubber plates very little equipment is needed — a short bladed knife, a straight edge, and a pair of pliers. The first step in the production of this type of plate is to make a transparency on vellum with a soft pencil. Then the plate is thoroughly cleaned and

International Craftsmen's Convention at San Francisco Draws Printing Executives and Their Ladies

1 — John Cobb, Western Printing & Litho Co., Racine, Wis., prepares convention notes aboard the Challenger on way to San Francisco as a part of his report to the next meeting of the Milwaukee-Racine Club.

2 — George Glenn of Duluth; W. S. McDonald, Manager of Duluth's Ashtown Printing Co.; Paul E. Gallagher, Manager, Southern California Agency, Mergenthaler Linotype Co.; William Brisbin, Omaha Club's President.

3 — Andy Chuka, Phoenix (Ariz.) Club and Bell Schultz, daughter of Walter Schultz, Dallas (Tex.) Club.

4 — Group of those participating in the Letterpress Presswork Clinic on Tuesday morning. Front row (left to right): Vice President Lee Augustine, Printing Machinery Co., Cincinnati; Chairman of the Clinic Carl Hillers, who is Superintendent of California Packing Co.'s Oakland plant; William F. McKannay of San Francisco, discussed *How Far Should Pre-Makeready Go?;* Rear row (Left to right): James A. Magee, Superintendent of IPI's Oakland (Calif.) plant; Dick Templeton, jr., Superintendent of J. W. Clement Co., Buffalo; Craig Spicher, Miehle Printing Press & Mfg. Co., Chicago.

5 — Mrs. Plummer and John S. Plummer. Mr. Plummer manages Intertype's Chicago Agency. Both enjoyed the trip to San Francisco via Union Pacific's Challenger.

6 — The Offset-Lith Clinic had these three men as speakers on Tuesday afternoon. Left to right: Chairman Andrew George, Chemist with the Schmidt Litho Co., San Francisco; Lon Ganglmayer of the California Ink Co., and Vice President Harry A. Porter of Harris-Seybold-Potter Co., Cleveland.

7 — Guy Martin, Vice President, Harris-Seybold-Potter Co., Cleveland; Past-President Clark Long, Washington, D. C.; Past President Tom Cordis, San Francisco.

8 — Harry Tait, San Francisco Manager for Mergenthaler Linotype Co.; Production Manager Al Lengel of the Oakland (Calif.) *Tribune;* George H. Moore, California's State Printer; Bert J. Dray, Zellerbach Paper Co., Los Angeles.

9 — Paul O. Giesey of Portland (Ore.) was Chairman of Monday's Typographic Clinic. With him are International President Frank McCaffrey of Seattle and Harry A. Sachs of Baltimore who secured the 1941 convention for Baltimore.

10 — Past President John M. Callahan (Cincinnati) waxes eloquent about San Francisco's seals to First Vice President Eric O'Connor of Montreal.

11 — Elmer Hostettler, Los Angeles Intertype Agency Manager; Ed Samuel, Superintendent, A. S. Gilman, Inc., Cleveland; Frank Gillam and D. W. (Bill) Stock, also of Cleveland.

12 — Mac Sinclair, Editor, *Printing Equipment Engineer;* J. L. Frazier, Editor, *The Inland Printer;* Ernest F. Trotter, Managing Editor, *Printing*, aboard the Challenger on the way to San Francisco.

13 — Ralph H. James, San Francisco silk screen expert and S. H. Hazleton of General Electric's Lamp Department, both appeared and spoke at the New Developments Clinic Wednesday afternoon.

14 — Gus Liebenow and Basil Parsons, both of Thomson National Press Co., and Tom Pape of the Newark (N.J.) Club.

15 — Dick Templeton (seated) is attempting an important report as Chairman of the Officers' Reports Committee, but is temporarily interrupted by Harry Hayek of Portland, Ore., and Andy Chuka of Phoenix, Ariz.

16 — Mrs. H. Colton, San Francisco; Mrs. Carl Hillers, Oakland, and Mrs. Maruce Quinlan of Palo Alto.

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Ray Leach — Constructive Executive

COMPOSING Room Superintendent Ray Leach of the Omaha (Neb.) *World-Herald*, passed away in July. A large but widely scattered group of newspaper mechanical executives who knew him regret exceedingly the abrupt end of a man who seemingly had not yet reached the top of the ladder in his profession.

He was the type of executive of which the newspaper printing industry is in need. He knew production costs, especially those related to the composing room. More importantly, he knew the psychology of printing plant administration. As a cost analyst no one will dispute his reputation. Added to this, he possessed the ability of being able to pass on his ideas to other executives seeking help.

His personality was of the quiet, refined kind. His executive orders were issued without bluster. More than one person has stated that Ray's orders were given in such a way that it was easy to carry them out — gladly.

Distinctly, Ray Leach not only helped to elevate the profession of mechanical executive to a higher level, but he also contributed much so that others could reach that level.

the tracing is placed face down upon it. After applying pressure the image is transferred to the plate. A "fix" made from rubber cement and alcohol is used to protect the image.

The plate is constructed in the following manner: (1) A layer of hard rubber, (2) A layer of fabric, (3) A layer of soft rubber, and (4) A layer of fabric.

In cutting, the knife never penetrates below the first layer of fabric. After cutting around the image which has been transferred from the tracing, the waste is stripped off with pliers. Following this method, a plate 18 in. by 24 in. can be stripped in 10 or 15 min.

Mr. Oakes made the following suggestions for the successful use of rubber plates: (1) Press bearers should be carefully checked for 0.918 in. (2) Make sure that the press is riding on its bearers. (3) Plates should be 0.916 in., because of the spring factor in the press. (4) Makeready sheet should be pulled with a full color. (5) All markup on the makeready sheet should be done from the front, using a carbon on the back. (6) Makeready should consist of not more than two hangers and possibly a spot sheet. (7) Roller settings should be checked by washing form and setting rollers with a one pica line on the *form*. (8) The best papers to use with rubber plates are offset papers. (9) Ink should be checked for tack, the best consistency is about that of cup grease. (10) A minimum of cleaner should be used in washups. The best type of cleaner is one made up of 2 parts benzol and 1 part alcohol. (11) If a plate becomes swollen after use either soapstone or sulphur should be dusted on it. (12) It is not wise to dust plates going into storage with sulphur. (13) Four hours is the best time allowance between colors when more than one color is to be printed. (14) The use of gold ink should be avoided; however, silver ink works well.

Mr. Oakes then discussed the development of rubber plates for use in printing with aniline inks. At the present time presses made to handle these inks are printing at speeds of from 400 to 600 ft. per min. These are web rotary presses using molded rubber plates for multicolor printing. In preparing forms for molding rubber plates the same precautions should be taken by the lockup man as though he were preparing a form for electrotyping, allowing a little more space.

In the making of molded plates the first step is to warm the forms, after which they are placed in a molding press and a bakelite sheet is placed on top of them. A pressure of 1200 lbs. per sq. in. is then applied under a heat of 307 deg. The form remains in the press from 10 to 20 min., for close register work longer. This forms the matrix, and on this molded sheet a piece of raw gum rubber is placed. This is then put back in the press for curing.

The use of rubber plates is increasing because of greater ease in handling. They require no special equipment nor skill, and they have a variety of uses in printing 2-color jobs. In several Chicago plants it is the practice to lock up the black form and send it to press. An oiled sheet is then pulled, and sent to the plate maker, who cuts his plates for the second color from it. Mr. Oakes also pointed out that it was possible to make changes on press very easily by the use of a sticky tape.

TYPOGRAPHIC CLINIC

What Agency Expects

Under the able co-chairmanship of Paul O. Giesey, Portland, and Lester A. Neumann, Chicago, the Typographic Clinic was called to order promptly at 2 p. m., Monday, August 5.

The first speaker introduced was Walter Burke, of the McCann, Erickson Agency, of San Francisco; Mr. Burke's subject covered *What the Advertising Agency Expects from the Typographer — and Why?* His first appeal to the craft was that they carry on during the trying period we are entering, with industry being regimented in the National Defense Program that is now getting under way. The printing industry through the constructive thinkers of the craft must share the responsibilities and sacrifices which this program will make necessary.

The plants which are given contracts for producing scheduled work must be so equipped, and manned that quantity deliveries are assured to the client.

The factors of time, cost, and quality standards are paramount — with having to face the competition of other countries who through long hours and regimentation have lowered costs to a prohibitive standard.

The typographer must interpret, and analyze the sales motive behind the campaign which he is assigned to produce, that type, layout, motif, are employed to express a definite sales objective.

In the discussion that followed Mr. Burke's talk, he was asked regarding the policy of his agency, used in specifying the face of type — was it named for its functional value, or was it given any one of five names, with the instructions that only one would do? To this he answered that they used type faces as a means of attaining the result required — purely functional, as long as the character of the letter fitted the subject.

Reproduction Proofs

The second speaker on the program was O. C. Gefken, Chicago, representing Vandercook & Sons, proof press manufacturers. The subject assigned Mr. Gefken was *Better Reproduction Proofs and Transparent Impressions*. Mr. Gefken explained in detail the qualifications required of reproduction proofs — black on white. Quality, surface, color of stock; inks for the best results in sharpness and opacity. He covered the well-known Monsen method of pulling transparencies for direct contact printing, now being sponsored by the Vandercook & Sons company. Transparencies have as many as eight uses in saving steps in photoengraving and offset plate-making, which were comprehensively covered by the speaker.

Type For Molded Rubber Plates

Setting Type for Molded Rubber Plates was the next subject on the program, ably covered by D. C. Nichols, of San Francisco. The molding of rubber plates requires precision material — the form must be as near uniform in height as possible. Specifications for proper lockup which will give the best moulding results were given. These requirements are necessary due to the fact that there are no methods of correcting the mold after it is once made. No wood furniture, or wood mounted engravings should be a part of the form; bearers should be 18 points from the edge of the type form.

Type Matters

Craftsman Hartley E. Jackson, San Francisco, gave an able presentation of *New Type Faces and Typographic Trends*. Mr. Jackson is recognized as one of the most capable, and most practical typographers on the Pacific Coast. His review of typographic trends covered the period from 1893, when William Morris lifted

the typographic art out of the depths, through the early 1900s, when Caslon was revived and the development of type families was initiated. Among these was the famous Cheltenham family — probably no one type face enjoyed more popularity, and certainly no type face was ever produced in more variations. He cited a recent legibility test conducted among college and university students in 1939 — the upset being that 12 point Cheltenham bold was rated highest in the eyes of this group — very disturbing to the present-day typographic experts, who have practically relegated Cheltenham to the "hell-box."

The run of novelty faces was reviewed beginning in 1925. This has ended with the designing of an acceptable variety of cursives, which have given freshness and stream-line effects to modern typography.

The year 1918 opened the Goudy period of design — and through this versatile master of type design the most legible, and beautiful faces of all time were placed in the hands of the typographer — thus inspiring the fine work which was produced in the decades following.

Decadence periods have usually followed as these trends have come and gone, and the speaker through the question — "Will this happen again?" answered, "I think not"— for the control of trends is in the hands of those who develop modern advertising, men who express the advertising, and printed messages through careful study of conditions; interpreting them after scientific study of the subject, market, and other factors. This and the fact that the public has been educated, developing a definite appreciation — having become type, and design conscious.

Much credit was given the manufacturers of type-casting machines — courage in the advancement made in machine production, the recognition of what is needed in type faces. Development has shown that some types cannot be successfully produced by machine composition, this presenting the thought that the type must be fitted to the machine that it may be universally used. Education through the Craftsmen has been a great factor — the "Share Your Knowledge Review," and the "Technical Educational Digest" contributing much toward the constructive advance in quality, and in production methods.

He closed with the thought that "In typographic trends, we have seen only the beginning."

Craftsman Charles Lindecker, San Francisco, capably handled the subject *Photo-Lettering Machines*. His first statement was to assure the craft that this development should not be looked upon as one that would replace typesetting. Progress has been made that makes possible and practical the use of these machines in certain types of work — labels especially, not affecting the type work as much as eliminating the need for hand-lettering.

Each face of type, or each design must have a master alphabet — this one factor makes prohibitive the possibility of having a variety of faces comparable to those now available in type. The field to date is limited.

Under the heading of *What Can the Typesetting Machine Makers Do to Help the Typographer?* Craftsmen Les Neumann opened with the statement that there should be a definite standardization of type faces — why should there be as many as five designs of the same type face; why should there be variations in the alignment of one type design with another of like design? The speaker stated emphatically that such variations seem to be deliberate — and absolutely uncalled for. The sale of equipment, where the manufacturer knows such expansion is not sound, or necessary was expressed as detrimental to the stabilization of the industry at large.

The practice of mailing to clients of the printing industry, and advertising agencies advance specimens of type that is not available creates embarrassing situations. The type is called for, and many times the trade is not advised of its name, nor the characteristics of the

Elmer J. Voigt, Vice President of Western Printing & Litho Co., Racine, Wis., elected Second Vice President of the International Association of Printing House Craftsmen.

design, leaving them in the dark, when they should be the ones to introduce it to the customer.

Co-Chairman and Craftsman Paul O. Giesey followed up presenting the subject, *How Can the Type Founders Improve Their Service to the Printer?* His first concrete example was the wide variance in the gradation of types in the average series. These begin with the need for more faces cut in 7, 9, and 11 point — going up the scale — the jump from 14 to 18 point often creates problems for getting the desired effect, this being more in evidence in the sizes of 18 and 24 point. The lack of accessory characters in the right weight and size of face — dashes, per cent marks, fractions, etc. — above 10 point these characters become too large for good typography, making necessary the use of one size smaller. Fonts of type must be cut to overcome the deficiencies of poorly spaced apostrophes; faces with low descenders carry excess metal on the shoulder left for the

Harvey Glover, Superintendent of the Sweeney Lithograph Co., Bellville, N. J., is International Craftsmen's Third Vice President.

g, j, p, q, y, etc. This could be corrected in the casting, a saving in metal, eliminating labor after the fonts have been purchased.

LETTERPRESS PRESSWORK CLINIC

The first speaker at the Letterpress Presswork Clinic on Tuesday morning was Vice President Lee Augustine, of Printing Machinery Co., Cincinnati, who talked on *It's the Base That Counts*. The meeting was presided over by Supt. Carl W. Hillers of the California Packing Corporation's printing plant. He pointed out that there is too much bewilderment on the part of letterpress printers concerning their capabilities in comparison to competitive process. These processes have very few advantages which are not within the reach of the letterpress printer.

Processes which are competing with letterpress require precision standards, and by like token precision should be the basis of letterpress. Accurate presses are a prime requisite, as are accurate plates.

The use of a good metal base system will enable the printer to: (1) Purchase

P-Double-E's Annual Equipment and Supplies Index will tell you where it is made.

Groups of Mechanical Executives Attending the Chicago A. N. P. A. Mechanical Conference

1—Ellis Speer, Composing Room Superintendent, the Raleigh (N. C.) *News and Observer;* I. J. Lockwood, Ann Arbor (Mich.) *News;* Millard Shirts, Port Huron (Mich.) *Times-Herald;* H. Alva Edwards, Kokomo (Ind.) *Tribune.*

2—Mechanical Superintendent A. I. Lundberg, Ft. Worth (Tex.) *Star-Telegram;* Don Crews, Vice President, Sam'l Bingham's Son Mfg. Co.; F. W. Schnell, R. Hoe & Co.; C. D. Atkins, George H. Morrill Co.

3—Bernard Schlegenmilch, Stereotype Superintendent, Ann Arbor (Mich.) *News;* Wm. R. Comber, Rolled Plate Metal Co.; L. J. Lockwood, Composing Room Superintendent, and G. A. Losey, Newspaper Pressroom Foreman, Ann Arbor (Mich.) *News.*

4—W. R. Coddington, Composing Room Superintendent, Youngstown (O.) *Vindicator;* Charles J. Hentschell, Production Manager, St. Paul *Dispatch and Pioneer-Press;* Donald H. Boyce, A.N.P.A. Mechanical Department Assistant to Manager W. E. Wines; F. Clifford Estey, American Zinc Products.

5—Pressroom Superintendent S. R. Weiskittel, Mechanical Superintendent H. D. Rindsberg, Composing Room Superintendent Walter A. Grannen, Stereotype Superintendent Lee Moorman, all of Cincinnati *Enquirer.*

6—Michael A. Vogel, Ass't Stereotype Foreman, and George Scharton, Ass't Stereotype Foreman, both of Chicago *Herald-American;* Edgar Mills, Jr., Eastern Newspaper Supply Co.; A. W. Kiger, Stereotype Superintendent, Chicago *Herald-American.*

unmounted electros, which represents a saving over mounted electros; (2) Increase life of the plates; (3) Greatly reduce form preparation time; (4) Improve quality of the work; (5) Eliminate worries of climatic changes affecting the printing forms, and (6) Reduce shipping or storage charges.

Today there are several types of metal bases. The diagonal type, the honeycomb, the small sectional, and the unit book block. Mr. Augustine exhibited samples of these various types to the clinic. He also pointed out how it was possible for the printer to make use of accessories such as perforating rule, register marks, nigger heads, etc. with a patent base system.

Mr. Augustine displayed a number of old type metal bases and illustrated his talk with large photographs of early patents.

Printing Ink Developments

Superintendent James A. Magee of IPI's Oakland, Calif., branch, covered the subject of *Printing Ink Developments.* He pointed out that great strides have been made recently in the chemical industries, and that the present trend is to think of inks as chemical coatings. The ink manufacturers are seeking to develop new inks which will reduce the cost of printing.

One recent development in printing inks that has been very successful is Vaporin. Its principle is the deposition of the solid material by partial evaporation of the vehicle. It requires no additional equipment for the printer other than a gas burner on the press. It took three years to develop it, and one of the biggest problems was to have stability of both body and color.

Vaporin has the additional qualities of printing sharp and clean, and there is a better gradation of tone in the halftones. In multicolor applications there is greater brilliance because the inks dry before they have a chance to blend.

How Far Should Makeready Go?

William F. McKannay talked on the subject *How Far Should Pre-Makeready Go?* In defining pre-makeready he said that it was the proper coordination of everything before going to press. He pointed out that pre-makeready starts with the line-composing machine slug, which should be 0.918 in. high, and this also applies to any other material in the composing room.

All cuts should be carefully checked before being placed in the form, because the cost of doing this in the composing room is much cheaper than to take it out of the form after going to press. In his plant it is the practice to pull overlay proofs of the cut at this time, which has resulted in substantial savings in makeready time.

One very important point in pre-makeready which is often overlooked is to obtain a definite final OK from the customer of final page proofs before going to press, or making plates. Changes on press are very expensive and someone has to pay this expense. He added "Because printers are always doing the impossible they usually take care of this, too."

There are other things which enter into pre-makeready, ink being one of the most important. Before going to press with a job the ink to be used should be carefully checked on the paper to be used for drying, color, picking, and other requirements. Conditions in every printing office are different, and for this reason each shop must study its own conditions.

SAID MR. SPICHER:

A press must be rigid, but not cumbersome. It must be fast, and yet it can't be too light. And it must register accurately, the limit of innaccuracy allowed by the manufacturers is that not more than 4 sheets in every 100 should be out of register over 0.004 in. A press must have proper distribution, so that a thin film of ink can be carried, with no ghosts. He pointed out that sometimes ghosting was caused by improper roller setting, and inadequate makeready.

What's New in Presses?

Craig R. Spicher covered the subject "What's New in Presses?" In his opinion the printing press is the most wonderful machine built. Once a sheet is printed by the press it cannot be altered, which means that attention must be paid to all details in the manufacture of presses. The manufacturers of presses are constantly seeking to improve their product, and he said that he thought every printer should make it a point to go through the plants of any one of the press builders to see what actually goes into the building of a press.

Sometimes printers can't understand why special devices and gadgets aren't

added to presses. The thing they fail to take into consideration is that a printing press is a standard product, and it can't be too specialized. For example a press which could handle only onion skin papers would have an extremely limited market, whereas one that would handle all kinds of paper would have a much wider market.

SLOW TO ACCEPT NEWER METHODS

As a rule printers are slow to accept new methods, and new equipment. The speaker said "Too often the printer wants John Jones around the corner to try it out first." The truly progressive printer never says "It can't be done." It is important to develop one's powers of reasoning. It is also important to keep well informed, and one of the best ways to do this is to attend Craftsmen's meetings regularly.

A printer is constantly having troubles in the pressroom, and in the solution of these problems he should consider not only how to correct them, but also inquire into why they occurred. In other words, it is all right to apply corrective measures, however the progressive printer will inquire into what is causing the trouble, and endeavor to eliminate the trouble at its source.

OFFSET LITHOGRAPHY CLINIC

The Offset Lithography Clinic was held Tuesday afternoon. Andrew J. George, chemist for the Schmidt Lithographing Company, San Francisco, presided as chairman. Stan Smith of Montreal, Can., was named Co-Chairman.

The chairman first introduced Lon Ganglmayer of the California Ink Co., who discussed *Platemaking and Photography*. The principal part of Mr. Ganglmayer's talk was devoted to a minute and clear-cut technical description of the making of offset plates by albumin and deep-etch methods. Besides discussing in a most interesting way the newer developments in photographic materials, films and halftone screens, he described the particular uses for which each kind of material and equipment is best adapted. His discussion of the latest methods of making deep-etched lithographic plates and the results that may be obtained with them was of special interest.

An interesting statement by the speaker is that in a 200 line screen deep etch plate the highlight dot is 0.001 in. diam.

Harry Porter, Vice President of the Harris-Seybold-Potter Company, Cleveland, spoke on *New Developments in Offset Presses*. Mr. Porter brought out most clearly that the constant improvement in offset presses has been one of the important factors in making lithography one of the most important reproduction processes in the Graphic Arts.

Mr. Porter in discussing the offset process, stated that the job to be printed should not be fitted to the process, but rather should be done by the process best suited to it.

One of the highlights of his talk was a quotation from Louis Traung, San Francisco lithographer, in which the history of the development of offset presses has been one of the important factors in making lithography one of the most important reproduction processes in the Graphic Arts.

Mr. Porter stated that San Francisco was really the birthplace of the high-speed two-color offset printing press. Louis Traung is not only the "daddy" of the two-color press but also of the four-color press. This is the 10th anniversary of the four-color offset press.

In his letter to Mr. Porter, Mr. Traung stated that it is now nine years since four-color offset presses had been installed in his plants. In reference to the productivity of the offset process, Mr. Traung described a severe test by means of a four-color job done on light paper. In this particular job, the gold was first printed, then the paper was passed twice through a two-color press. He wouldn't be afraid to tackle anything from a postage stamp to a large 24-sheet poster. In addition to being able to do this work at important cost reduction, the developments in inks, blankets and rollers within recent years have made the execution of this type of work possible.

A few highlights of Mr. Traung's statements to Mr. Porter are:

Because of the chemical nature of the lithographic process, it being more definitely chemical in nature than letterpress or gravure, perhaps accounts for the research which has been done to overcome imperfections in the process.

The greatest share of credit for the refinement of the offset process belongs to craftsmen in the various departments of the lithographic plant.

Mr. Porter stated that the lithographic industry is a $200,000,000 industry. By 1942, the industry will have increased at least by another 20% or close to $250,000,000 in dollar volume.

Both Messrs. Porter and Traung are enthusiastic about the potential value of four-color offset-lithography. In the opinion of the speaker one of the largest fields for offset is that of schoolbook production. From a registration spoilage standpoint alone there is no comparison between the single and two-color presses.

Chairman George followed immediately after Mr. Porter had completed his address. He discussed *Research in Offset-Lithography*. He brought out the point that since lithography is perhaps the most technical of all reproduction processes, rapid advance of the lithographic industry can be accomplished only by constant research on the technical problems involved.

Mr. George described the Lithographic Technical Foundation, which was established to carry on this research work. He also outlined most of the important work done by the Foundation.

All of this work is published so as to make every new development immediately available for the use of the whole lithographic industry.

THE BINDERY CLINIC

Patent Bindings

At the Bindery Clinic of Wednesday morning, Earle Gray of Los Angeles presided. The various forms of patent bindings were discussed by Oscar Pederson of San Francisco. He had actual samples of scores of jobs produced by the various methods of patent binding, and he pointed out the differences between the various types, as well as their respective advantages and disadvantages.

Adhesives

Dougald F. Barthelmess of San Francisco, covered the subject of *Adhesives* in his talk. The properties of an adhesive are governed by the job it has to do. In adhesives for paper it is important to know the percentage of air per cu. ft. of paper in order to determine the correct type to use. The following table was shown to illustrate this.

	% air/ cu. ft. paper
Glassine	0.17
Bond book, low bulk	0.5
Bond book paper	0.7
Chipboard, newsboard, and newsprint	1.1
Kraft book paper, high bulk	1.2
Dry finish Fourdrinier Kraft	2.0

The greater the percentage of air, the more porous the paper, and *the adhesives must be fitted to the pore size of the paper*. Papers with large pores require adhesives of the penetrating type, because the adhesive must penetrate into the pores quickly. Papers with small pores require a cohesive, or filming type. When a paper with large pores must be adhered to a paper with small pores, an adhesive must be selected which does both jobs if good adhesion is to be obtained.

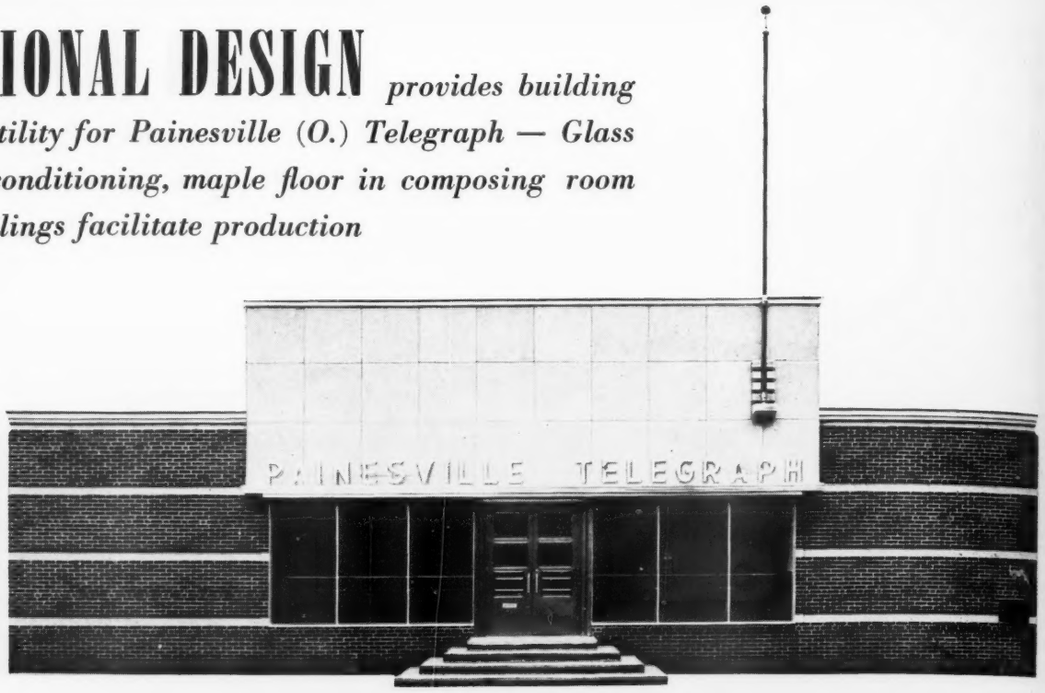
By considering the problem of adhesives from this angle it is easy to see that the application of pressure will force the adhesive into a large pored paper more easily than in the case of a small pored paper. In book manufacture consideration must be given to the degree of flexibility required, because the more rigidity an adhesive gives to a book, the

(*Continued on page 42*)

CRAIG SPICHER SAID:

At the San Francisco Craftsmen's convention Craig Spicher, of the Miehle Printing Press & Mfg. Co., stated during his talk: "Don't be afraid of the word 'efficiency,' because efficiency means simplicity. The efficiency engineer can do a lot to make our jobs easier, and we should not be afraid of him."

FUNCTIONAL DESIGN *provides building of highest utility for Painesville (O.) Telegraph — Glass block, air conditioning, maple floor in composing room and cork ceilings facilitate production*



ONE of the finest buildings ever to have been erected in a city of 12,000 people is that recently finished for the Painesville (O.) *Telegraph*. The building, 60 ft. by 110 ft., consists of basement, first floor and a 19 ft. by 22 ft. remote control-assembly room on the second floor. This room is an auxiliary to Station WICA in Ashtabula, O. Owners of the building state that the modern or functional style of architecture was used in the design of the new building, because the function rather than the appearance of the building is of paramount importance. The functional type of building lends itself to the use of modern materials better than classical styles and lessens future maintenance and upkeep costs.

This is the novel method used to lift the Painesville (O.) Telegraph's linotypes, the heavy stereotype matrix rolling machine and other equipment pieces, from the second floor of the old building preparatory to moving them into the new structure just a short distance down the street. The shovel from the excavating machine used to dig out the basement of the new building was removed from the boom. A section of the second-story wall was torn out to permit moving the machines. After each of the machines had been trussed up as shown, the excavating machine lowered it to a carry-all which was used to move the machines to the new building. The steam shovel at the old building was used only to lower equipment to the truck.
The dollies were left under the machines when they were lowered over the roof of the old building. The truck was the same height as the floor level at the new building so the machines were rolled off the truck on the dollies on which they were mounted and placed in position on the composing room floor.

Construction of the building was executed by Payne & Beymer Company, Painesville contractors, under the supervision of J. Wallace Green, Painesville architect, and the firm of Hays, Simpson & Hunsicker of Cleveland.

A combination of reinforced concrete, red brick, stone, glass block and stainless steel was used in the construction of the building.

Glass block was used in place of clear glass windows in all but the front windows, the press observation windows and the rear windows in the edition delivery room. The glass brick was adopted primarily because of its functional characteristics — it transmits light more efficiently than clear glass insulates against passage of either heat or cold, and prevents condensation on glass in the *Telegraph's* air-conditioned building. The ridges in the glass block act as prisms to divert light beams and eliminate glare.

The first floor front of the building is utilized as a public lobby, the business offices, advertising and editorial departments and the composing room. In the basement are located the stereotype department and pressroom, the mailing room, newsboys' counting room, paper and ink storage, heating plant, air-conditioning units, as well as an incinerator with openings on both floors for the disposal of waste. The public may view the Duplex Tubular printing press from the outside by looking through the clear glass windows supplying light to the pressroom. This is made possible by the natural slope of the street alongside of the pressroom side of the building which normally would be at basement level.

The press rests upon a separate foundation so that operating noises cannot be transmitted through the building structure.

A shower and dressing room just off the basement is provided for employes.

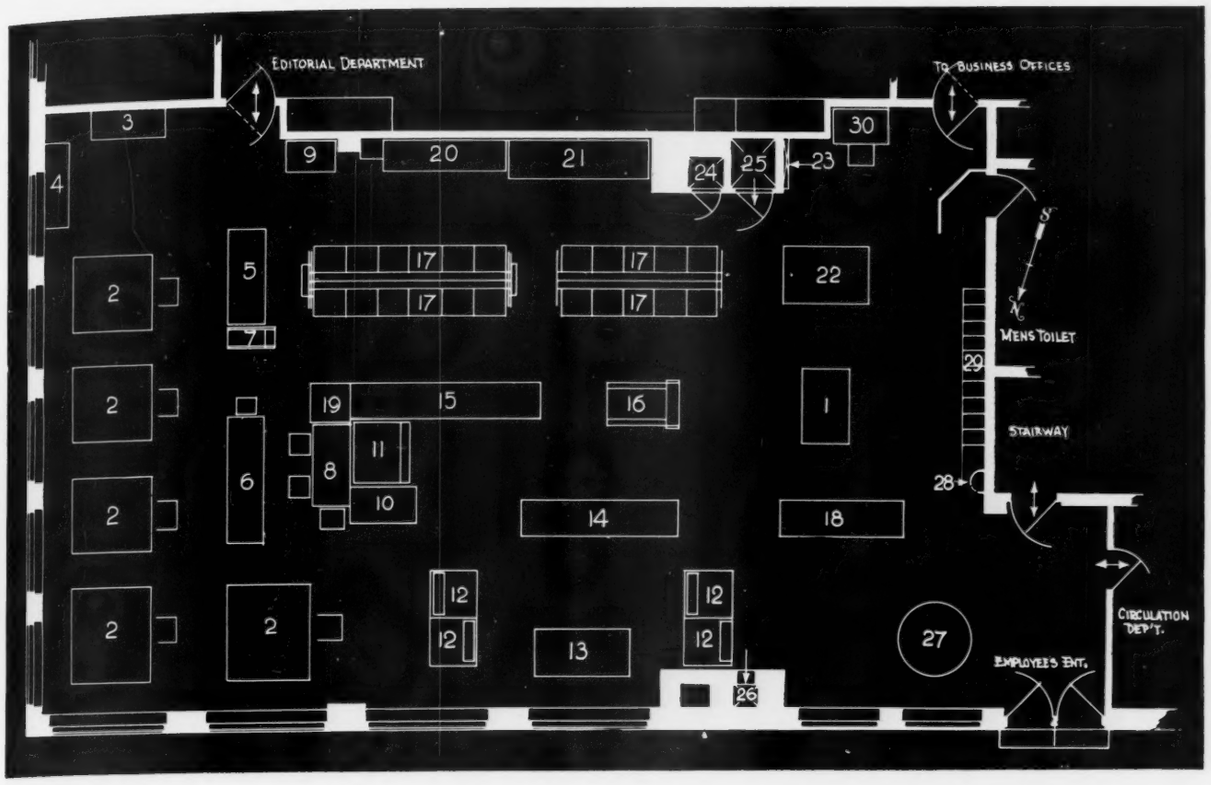
A five-car capacity garage harmonizing in style with the main building is located at the rear.

Interior Finish and Floors

With respect to the interior finish, all working parts of the building such as the pressroom and the composing room, stair hall and toilet rooms are finished with salt-glazed tile walls, which are non-absorbent and easy to clean. Fine maple block covers the floor of the composing room. First floor offices and lobby are covered with asphalt tile.

Acoustical Ceiling

The entire ceiling of the first floor is of 1½ in. thick cork. The cork was used



COMPOSING ROOM EQUIPMENT LAYOUT — PAINESVILLE (O.) TELEGRAPH

1—Foreman's Desk
2—Linotype Machines
3—Machinist's Bench
4—Machinist's Parts Cabinet
5—Main News Dump
6—News Dump and Storage
7—News Proof Press
8—Proofreaders
9—Head Cabinet
10—Ad Dump and Large Type
11—C&G Saw-Trimmer
12—Ad Cabinets
13—Type Border and Base Cabinet
14—Ad Stone
15—Makeup Assembling Stone
16—Vandercook Page Proof Press
17—Makeup Trucks
18—Cut and Mat Storage
19—Transfer Cabinet
20—Base and Live News Cuts Cabinet
21—Pickup Ads and Feature Storage
22—Matrix Rolling Machine
23—Matrix Chute to Stereo and Pressroom Below
24—Dead Metal Chute to Remelting Furnace Below
25—Dumbwaiter
26—Incinerator
27—Wash Fountain
28—Drinking Fountain
29—Clothes Lockers
30—Proof Desk for Merchants Who Wish to Check Their Ads

both for its acoustical properties and for its insulation value.

Office and lobby walls on the first floor are of painted plaster. Those parts of the wall most exposed to wear and traffic dirt are covered with lino-wall and the walls of the front entrance vestibule are of porcelain enamel.

Lighting

Lighting and electrical equipment throughout is of latest design. Fluorescent daylight lighting is used in the composing room, being installed in fixtures especially suited to the severe seeing tasks of this department.

Air Conditioning

An outstanding feature of the *Telegraph's* new building is its air conditioning system. The air is filtered to remove

Pass It On

Readers of Printing Equipment Engineer *will appreciate it if you will send the facts about any production help or mechanical device developed in your plant.*

The editor invites you to send in a description of some such device or method. Other executives may now have a problem similar to the one you have solved and would be glad to read about what you have done to eliminate it.

Mack D. Sinclair

Editor

P.S.—Just have one of the operators set it up in type and send a galley proof, or get out the old pencil and jot down the facts on proof paper or on white waste. Address: 1276 West Third St., Cleveland, Ohio.

Here is a view of the composing room in the Painesville (O.) *Telegraph's* new building. Composing Room Superintendent Lorin Bruce has installed all of the latest developments which could be utilized in a composing room of this size to facilitate production. Note the fine maple block flooring; fluorescent daylight lighting fixtures at 1 and 1, and auxiliary glasteel diffuser general lighting as is indicated at 2 and the makeup truck material trays. The fluorescent lighting fixtures each contain either two 48 in., 40 w. or two 36 in., 30 w. tubes.

Five Linotype machines are used for straight-matter and display composition.

Among the new equipment items installed are Hamilton type cabinets with work tops and material storage and a C&G saw trimmer.

Stereotype mat rolling is done in the composing room. After the mats have been molded they are sent down to the stereotype department immediately below by means of a special chute.

Dead metal for remelting into pigs for the line-composing machines is dropped into a chute. It falls into a bin opposite the remelting furnace immediately below.

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dust and dirt. The apparatus is of the forced air type, making both warm and cool air available. Any mixture of the two can be used to create desired temperatures. The air is forced through ducts to all parts of the building by a Sturtevant distributing fan and is pulled from different parts of the building by the same fan. The building is divided into eight zones. Different temperatures may be made available for each zone. Each zone is controlled thermostatically with Minneapolis-Honeywell instruments.

In cool weather warm air is supplied by heating air taken from the outside and the recirculated air by means of a steam boiler and steam coils. Cool air is obtained by utilizing outside air in the winter and most of the spring and fall seasons.

Executive personnel of the *Telegraph* is as follows: Business Manager H. H. Henes, Editor Harold Johnson, Advertising Manager R. N. Heyer, Circulation Manager Chas. A. Evans, Composing Room Superintendent Lorin Bruce, Machinist George Phelps, Stereo-Pressroom Foreman George Stephenson.

Left: Business Manager H. H. Henes and Composing Room Superintendent Lorin Bruce, of the Painesville (O.) Telegraph.

Milwaukee Club Officers

The new officers for the Milwaukee Club of Printing House Craftsmen are as follows: President Charles S. Lee, Trade Press Typographers, 407 E. Michigan St.; First Vice President Victor Schwarze, Krus Engraving Co., 240 N. Milwaukee St.; Second Vice President Walter F. Zahn, Zahn Typesetting Co., 407 E. Michigan St.; Recording Secretary John E. Cobb, Western Printing & Litho Co., Racine; Financial Secretary Lavine P. Jacobson, Olsen Pub. Co., 501 W. Cherry St.; Treasurer Andrew B. Fries, Western Printing & Litho Co., Racine.

INK DRYING BY INFRA-RED RAYS

By F. W. GRANTHAM*

*Engineer, Burdett Mfg. Co., Chicago

THE Burdett Manufacturing Company has produced a new ink drying apparatus for use on offset and letterpress roll and sheet-fed presses. With standard inks, it is possible to reduce the drying time to less than half of that now required.

In this ink drier a principle of heat transmission called radiation is employed. By using the principle of radiation heat instead of conduction or convection heat, it is possible to penetrate directly into the ink through the layer of air that insulates every printed surface. The radiant heat then changes to molecular heat inside the ink which is in a form that raises the temperature of the ink to around 350 deg. F. At this temperature the ink quickly goes through the drying stages of polymerization and oxidation.

To obtain radiant heat in quantity a new type of gas burner was developed. This burner gives off its heat in the form of infra-red rays. One of the first difficulties heretofore encountered in the burning of gas consisted of obtaining an adequate supply of air and providing sufficient time for the burning action to insure complete combustion in order to liberate the maximum number of heat units. By the use of a cup-shaped refractory surface it was possible to develop this burner so that sufficient air would be provided and the mixture of gas and air kept sufficiently hot by scouring across this hot refractory surface that the gas mixture would not be lowered below the combustion temperature.

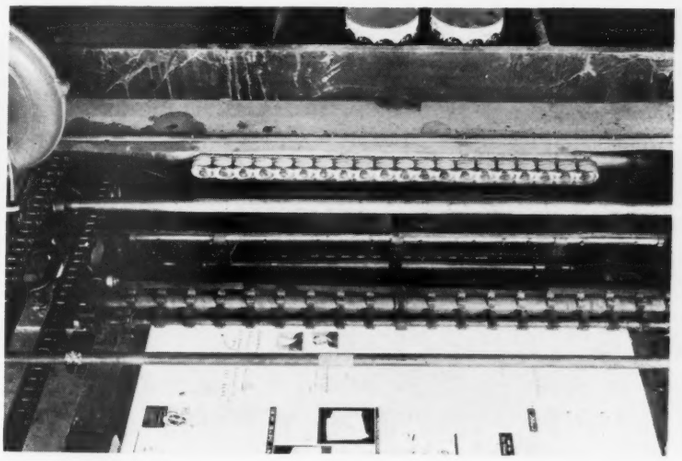
This method of heating an object by radiation is the same as exists where the sun is heating the earth and objects on the earth. It is the radiation from the sun that makes the mountain climber perspire even though the air about him is very cold. Radiant heat is molecular at the radiator and at the receiver but in between takes on a wave motion. Therefore, it does not lose its heat in transfer from the radiator to the receiver. In the case of printing press equipment, the radiator is the burner and the printed surface is the receiver.

The refractory type burner consists of a number of cup-shaped refractories in the center of which are nickel chrome baffle orifices. Gas comes out around the baffle orifices and is forced back against the refractory surfaces, raising them to 2300 deg. F. These refractory surfaces then act as radiator for infra-red heat waves. These long red and still longer infra-red heat waves get to their destination with virtually no loss on the way.

The equipment will operate on all types of city and liquid bottled gases. The burner itself may be installed horizontally or vertically or at any angle necessary for application to any type of press without interfering with its operation. The intensity of drying effect may be regulated by hand control. This apparatus requires no change in the press itself and can be supplied for any width of press.

As shown in the illustration, the burner bar consists of a row of radiant disks mounted approximately 4 in. from the sheet and shine down directly against the freshly inked surface. In operation this burner looks like a string of glowing coals supported above the printed surface.

The burner bar is fed with a mixture of gas and air which is supplied to it from the gas line through safety devices and a low pressure air blower. The standard units include safety features to eliminate accident hazard. The unit is synchronized with operation of the press.



Infra-red rays are used in this ink drying apparatus. Radiation is used instead of conduction or convection of heat.

Equipment

AND SUPPLIES

New Aniline Printing Method

The Anilox method of printing with aniline presses is reported to permit economies in operation and at the same time, make it possible to produce cleaner, sharper results. Anilox printing is a development of the International Printing Ink Division of Interchemical Corporation. It is now being used in several commercial plants.

The distinctive mechanical feature of the Anilox method is a specially prepared, deep-etched inking cylinder. The thousands of minute recesses (mechanically milled) on the surface of the cylinder regulate and limit the amount of ink that is taken up from the fountain with each revolution of the cylinder. Each little recess carries the same volume of ink at all press speeds and ink viscosities. The excess is wiped off by a rubber or metal doctor blade, such as is used in intaglio printing. Since this inking cylinder is metal, it can be ground to precision tolerances.

The inking cylinder transfers the ink to the plate cylinder, which receives a measured amount of ink at all speeds. A standard impression cylinder of metal or hard rubber is also used, the web passing between this cylinder and the plate roll.

Thus, by this method, one of the two rollers which are required on conventional aniline presses is rendered unnecessary. This is the inking roller which revolves in the ink fountain and transfers the ink to the distribution roller. In Anilox printing, the etched metal cylinder plus doctor blade takes the place of these two rubber rollers used in the conventional method.

The new method is said to permit sheet-fed printing when desirable, and to eliminate the need for oversize or crowned rollers such as are necessary with pigment inks on wide presses of the conventional type.

Further claims are: (1) The new, opaque, and more brilliant pigmented spirit inks may be run to best advantage with the Anilox setup. (2) The inks need

not be fluid; they may have a heavier body, thus printing sharper (or cleaner). (3) These inks will not settle in the containers, due to higher viscosity of the solutions. (4) More rub resistance and substantially greater gloss may be obtained with these inks on all stocks, because of the higher solids content of the ink. (5) Ink distribution is subject to no variation, regardless of press speed, viscosity of the ink, or setting of the blade (only one setting is possible). (6) With Anilox, a cleaner print will be obtained, because the plate transfers divided particles of ink rather than a continuous film, as in ordinary aniline printing.

IPI does not make the Anilox press equipment, but is interested only in the manufacture and sale of the printing materials used. Manufacturers of conventional aniline presses have been informed of this development and are in a position to supply the necessary equipment. Service engineers from IPI's Anilox department are prepared to give all information necessary for changing over present equipment to run with the Anilox system.

Goss Stereotype Flat Vacuum Casting Box

The use of vacuum for casting flat stereotype plates is available in the new Goss 69-G Flat Vacuum Casting Box.

The advantage of vacuum is that it irons out buckles and inequalities in the level of the mat and helps to produce a good flat plate. Also, if the operator wants to make a flat plate from a mat that has been used to produce curved plates, the suction is sufficient to flatten out the mat. Vacuum will give a more solid plate, providing a more faithful reproduction of the original. This is particularly important, due to the fact that casts from flat mats are used in forms from which full-page mats are rolled and cast into curved plates. Consequently, the less detail lost, the better the curved plate from which the actual printing is done.

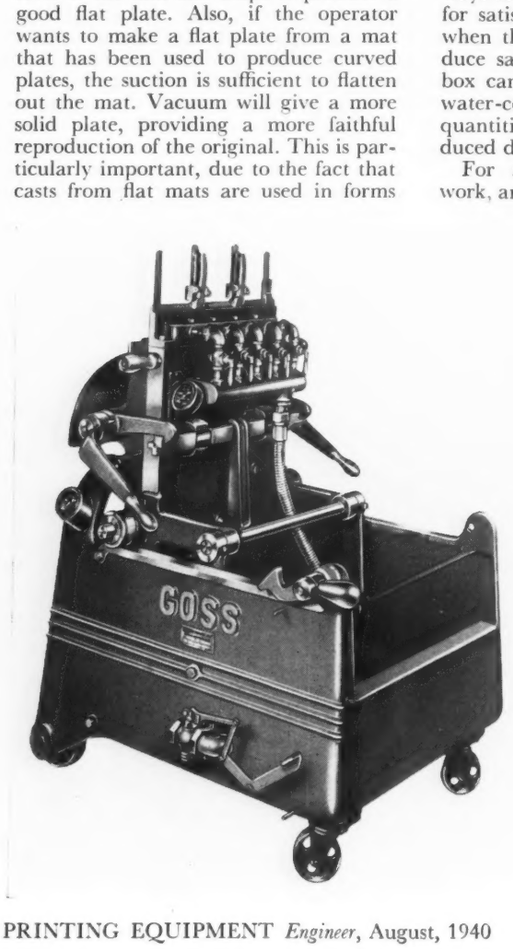
In the new Goss 8 column Flat Vacuum Casting Box, the movable back has a series of five cored chambers, separate valves being provided to enable the operator to apply the vacuum to any one of these chambers. A series of small holes connect with the cored chambers and apply the vacuum to the back of the mat.

Vacuum to the movable member or platen of the box is controlled by a foot lever. When the foot lever is depressed, vacuum is applied to the back of the manifold system. When the lever is touched with the toe, it then snaps back to the "shut-off" position. Vacuum is supplied by a self-contained, motor-operated vacuum unit which can be located in relation to the casting box to suit local plant conditions.

The full length of the chambers in the back can be reached by merely removing bottom and top plates with the manifold intact; so that if an accidental metal spill should occur, very little time will be lost in putting the vacuum system back into operation. Similarly, it is easy to clean out the vacuum system occasionally to remove accumulated dirt and other foreign matter.

The Goss 69-G Flat Vacuum Casting Box is equipped with dial type thermometers which show the exact temperature at all times. In this way, guesswork is eliminated, and the operator always knows when the box is hot enough for satisfactory operation, and likewise, when the members are too hot to produce satisfactory plates. If desired, the box can be equipped with one or two water-cooled members where large quantities of thick plates are to be produced daily

For special thin-plate, fine screen work, an electric-heated box is available.

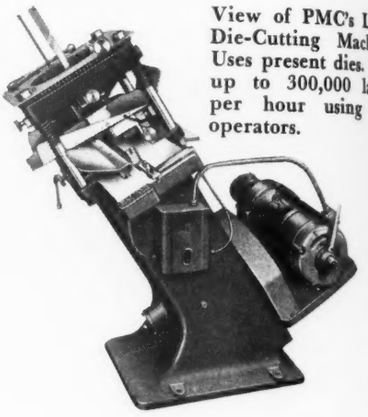


Goss's new 8 column Stereotype Flat Casting Box is equipped with vacuum apparatus for obtaining maximum flattening out of the mat. Made in full newspaper page size.

Label Die-Cutting Machine

Three hundred thousand labels per hour is the production claimed by Printing Machinery Company for its PMC Label Die-Cutting Machine. The cutter is fed semi-automatically and any label that can be cut with a hollow die can be handled in the machine. The machine is powered by a 3 h.p. motor, and its pressure ram makes 10 strokes per min., cutting 500 labels per stroke from standard thickness label paper.

The standard size machine will cut any size label from 1 in. square up to 6¼ in. sq., although larger sizes can be furnished.



View of PMC's Label Die-Cutting Machine. Uses present dies. Cuts up to 300,000 labels per hour using two operators.

The PMC Label Die-Cutting Machine may also be used for making the final trim on booklets, cards, etc., which must be round-cornered, doing two or four corners at one operation.

No special dies are required, since present dies may be used. The average hollow die, states manufacturer, can be locked into registered position in less than 10 min.

When making its cutting stroke, the die is cushioned against a ¾ in. stack of uncut labels held between guides by automatic catches which serves as a bolster between the ram and the die on each succeeding cut.

The entire mechanism is lubricated from one reservoir.

Illustrated folder available from Printing Machinery Company direct or in care of *Printing Equipment Engineer*.

Large Rubber Plate Work

What is claimed to be the largest four-color work ever done by means of rubber plates was recently executed by Paraflex Plate Corporation, and printed by Kalkhoff Press, Inc., both of New York, for Mobil automobile products. The job consisted of 16 posters, each done in three colors and black. Each poster is 22 in. by 32 in., 5 pt. stock, run four up on a Miehle two-color press. Excellent craftsmanship is in evidence. The design of each of the posters is in harmony with the use to which the posters are to be put and also with the peculiar technique of rubber plate making process.

Re-designs Matrix Molding Press

Re-designed to a lower height of 5 ft. 3 in., R. Hoe & Company recently announced a new hydraulically operated Hoe Matrix Molding Press for the production of mats by direct pressure. The advantages claimed for this type of mat molding are its deeper and more perfect impression plus greater accuracy for color register.

View of streamlined Hoe Direct Pressure Matrix Molding Press.

In its new design, the entire frame of the Hoe Matrix Molding Press is an alloy steel casting. The ram which determines pressure area and controls smoothness of operation is bigger—now 27½ in. diam. The platen measures 28 in. by 32 in.

Work tables at both front and rear of the press are attached to and aligned with the moving platen. The height is 38½ in. from the floor. The form sliding plate, which is scribed for convenience in placing the form, moves under the anvil on anti-friction bearings. The push-buttons which control starting or stopping and the ram operating lever are located for convenience.

Five seconds are required to develop maximum pressure of 800 tons. The required floor space has been reduced to 52 in. by 86 in.

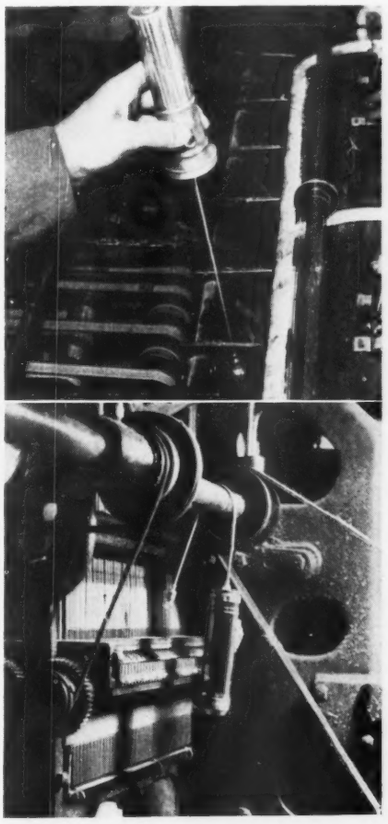
The Hoe Matrix Molding Press can be furnished for cold molding; or with electric heating of the lower platen only; or electric heating of both lower platen and anvil. The latter two arrangements are also available for steam heating.

Models equipped for heating are furnished with a special non-compressible metallic insulation. While the press is off pressure, heavy springs lift the heated platen away from the insulation material to further reduce transfer of heat to the ram.

Flashlight Extension

For obtaining light around and under presses, line-composing machines and other printing equipment where it is difficult to use an ordinary electric bulb, the Sierra Flashlight Bulb Extension has been developed. Made in lengths from 6 in. to 36 in., the extension is provided with a plug which can be screwed into most any flashlight with the bulb in the opposite socket. The longer extension can be used for projection downwardly between machine parts, in or around a motor, or for making a quick hook-up to bring light to otherwise inaccessible places. The stem of the extension can be bent into hook shape or can be fashioned into its own stand and set in position so that both hands are free to work.

The extension is made of special copper wire encased in high grade aluminum alloy tubing, and is made by the Sierra Aircraft Company. Further information from the company direct or through *Printing Equipment Engineer.*



This Sierra Flashlight Extension can be screwed into most any fiashlight socket. Enters openings as small as 1/16 in. diam. Stem of extension is extremely ductile and may be severely formed into many curves for illuminating otherwise inaccessible machine parts.

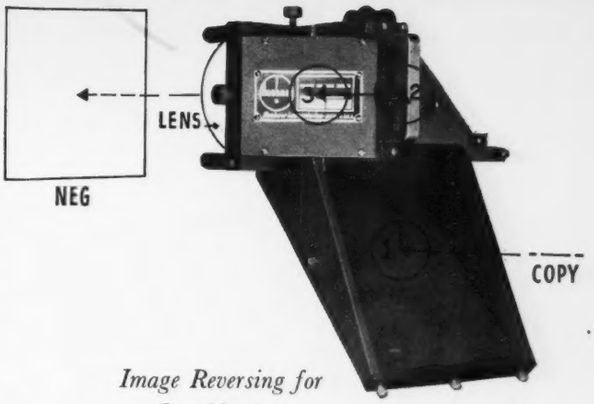


Image Reversing for Graphic Arts

This diagrammatical illustration of the Huebner Straight Line Image Reverser for use by photo-engravers, offset-lith and gravure plate-makers is printed supplementary to the article which appeared in the May issue of *Printing Equipment Engineer.*

In structure, the Reverser is a compact unit mounted on, and readily detachable from the camera lens barrel.

The arrow lines *1*, *2* and *3*, indicate the path of the image as it is reversed by the optical flat reflectors before the image enters the lens. These three optically flat reflectors, accurately placed and proportioned in size to the converging lines of the image, combined with a ghost image trap plate, produce the reversed images on the negative.

New Intertype Cuttings

Intertype Corporation announces further cuttings in the Garamond, Vogue and Kenntonian series. Shown below are samples of 11 point Garamond Bold with Italic, 18 point Vogue with Oblique and 24 point Kenntonian with Italic.

THIS paragraph is set in eleven point Intertype Garamond Bold with *Bold Italic* 123456 *123456*

11 Point Garamond Bold with Italic

ABCD abcdefgh 123
ABCD abcdefgh 123

18 Point Vogue with Oblique

ABCabcdef123
ABCabcdef123

24 Point Kenntonian with Italic

Three-Part Type Fonts

Innovations in fonting and packaging, feature the foundry version of Spartan Medium and Medium Italic now being offered by American Type Founders, according to Gerry Powell, typographic director.

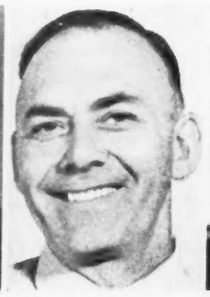
The Spartans will be packaged in three parts, — caps, lower case and figures — instead of in the two-part fonts. The printer who wants only caps will be able to buy them without the figures ordinarily included in a cap font, or the printer who desires more figures than are packaged in a single font can

(*Continued on Page 26*)

A Number of Minneapolis (Minn.) Star-Journal's Mechanical Production Executive Staff

Fred Curle, Composing Room Superintendent

D. D. Curriden, Engraving Superintendent



J. H. Hopf, Stereotype Superintendent

Walter Carney, Pressroom Superintendent

Star-Journal in Minneapolis now in its enlarged and modernized home — Space provided for future expansion

By HORACE ANNIS

A PROGRAM of modernization and expansion, begun more than a year ago by the Minneapolis Star and which was accelerated following the acquisition of the Minneapolis *Journal*, when the two papers were merged into the *Star-Journal*, was brought to completion with dedication of the enlarged plant in July. This newspaper plant is one of the finest in the country west of the Mississippi. Special emphasis has been placed on lighting, acoustics, ventilation and smooth production flow. Not only has provision been made for ample working space under present conditions, but additional space is available in several departments for future expansion.

The original building, a four-story structure, contained about 55,000 sq. ft. of floor space. With the addition of a wing for pressroom purposes and extension of the back of the building, four stories in height, floor space has been increased to 120,000 sq. ft.

The first floor, facing on Sixth Avenue south, has an exterior of black granite with alternate black and white brick artistically employed on the facing of the other floors.

On the first floor are the pressroom, occupying 9754 sq. ft. of floor space, space for the circulation department and the mailing room which occupies 8000 sq. ft.

The Pressroom

One part of the pressroom, 43 ft. by 58 ft., houses the Scott presses, and the new pressroom 132 ft. by 55 ft., the rest of the splendid press equipment. The department is in charge of Superintendent Walter Carney. The new pressroom is provided with light through approximately 3000 sq. ft. of glass tile in the sides and end as well as in the monitor top. Excellent ventilation provides a flow of air as fresh as the outdoors. Floors are of wood block set on end. Automatic coolers provide fresh, cool water for the pressroom employes.

There are 22 black press units in operation, ten being Scott, nine Hoe and three Goss units. There are five color cylinders. The units are lined up as follows: Ten Scott, two color cylinders and three pairs of folders; nine Hoe, two color cylinders and two pairs of folders; three Goss units, one color cylinder and one pair of folders. In addition, there is one 8-cylinder, heavy-duty, high-speed Goss color press which is run at 36,000 per hour on 8-page sections. It is so installed as to make it possible to add more units as needed.

All of the 22 black units have automatic tensions. The Scott units are equipped with Jones tensions, while the 12 units in the Hoe and Goss line have Cline-Westinghouse tensions and reels. The Goss color press is provided with Cline-Westinghouse full-speed paster.

Plates reach the pressroom from the stereotype department on the floor above by means of an automatic lift which lowers the plates to the press conveyors. Plate delivery to either Scott or Hoe conveyors is controlled by an electric eye device. Incidentally, static is done away with by static eliminators developed by the *Star-Journal*.

Mailing Room

Since it is on the same floor as the pressroom, let us next consider the mailing room which is in charge of Superintendent Vern Hol. To it come papers from the batteries of presses via eight Cutler-Hammer conveyors. From these conveyors the papers are taken and placed on three tables for distribution. Generally, the papers arrive over only three or four conveyors but at times, such as when the Sunday paper is being run, additional conveyors may be in operation.

From the work tables papers are moved by means of belt conveyors to three Signode wire tying machines, each with a capacity of 26 single ties per minute. The conveyor system is also used in moving the papers from the tying

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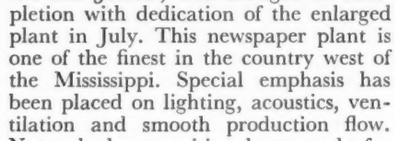
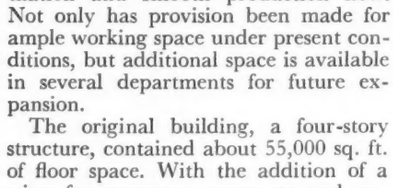
Paper Temperature Indicator

The Paper-Temp, an instrument designed to help eliminate paper spoilage in the printing plant, has been announced by Perfecting Service Corporation.

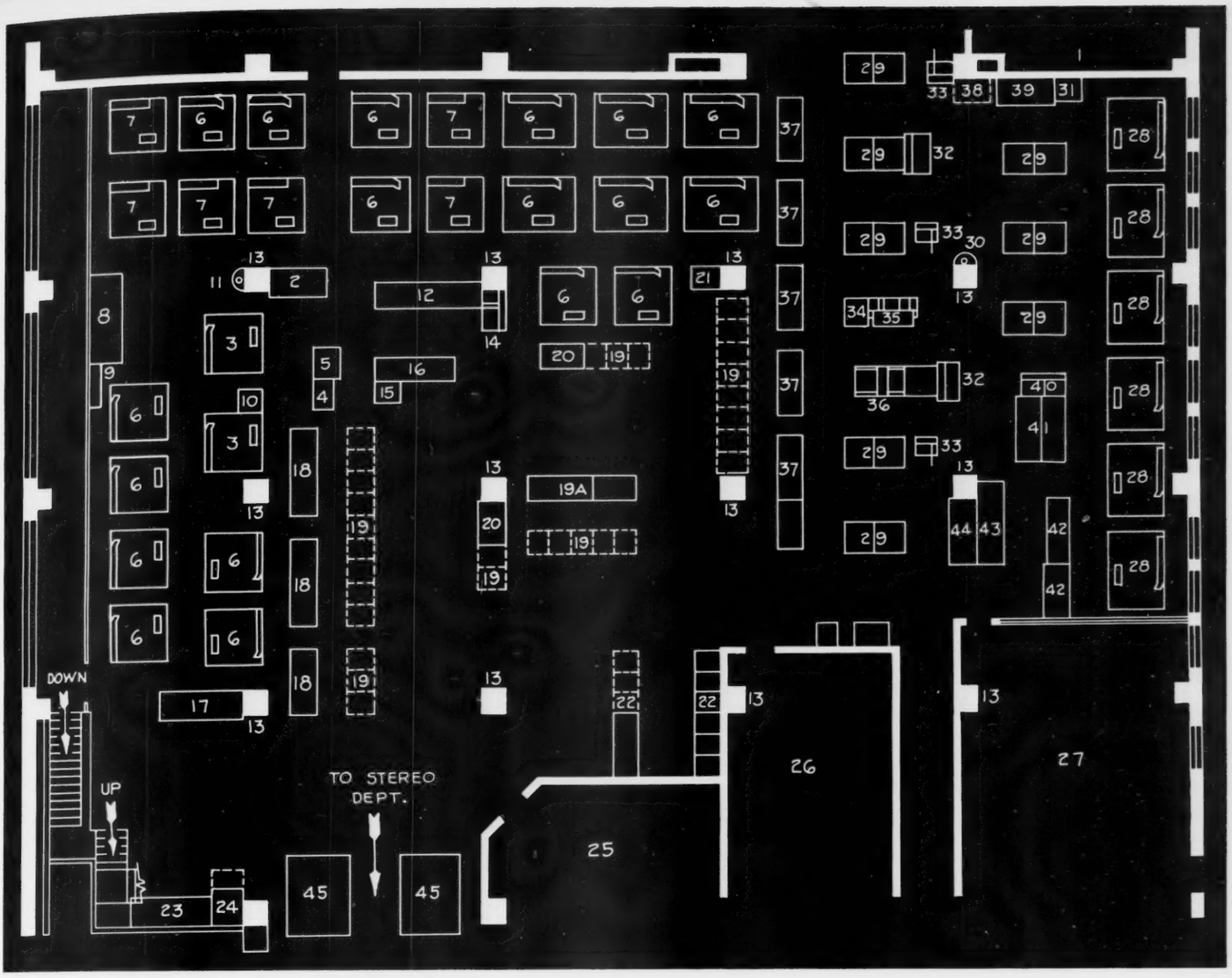




Paper spoilage in printing plants can be caused by temperature differences between the paper and the room in which it is unwrapped and used. Developed by paper control engineers, Paper-Temp is a lance-like pyrometer which can be used to determine the temperature of a skid or package of paper before the wrapper is removed. The Paper-Temp indicates whether the paper is in balance with, or at a lower or higher temperature than the room so that the user knows when it is safe to unwrap the paper without danger of spoilage.

New Resinous Emulsion Group

A new group of resinous emulsions, the polyvinyl acetates, is announced by by The R. & H. Chemicals Department, E. I. du Pont de Nemours & Company. Polyvinyl acetate resins in solid form and in solution covering an exceedingly wide viscosity range, are also available. Properties of the new emulsions suggest their application in general adhesive use, printing inks, textile sizes, textile stiffeners, etc. Because polyvinyl acetate emulsions contain only water and resin, it is possible to avoid the use of flammable expensive, organic solvents.



Equipment Layout, Minneapolis (Minn.) Star-Journal Composing Room

Note the production flow. Advertising copy enters at the Dispatch Room, lower right-hand corner at 27, and moves to the mark-up table 42, and on to copy hooks 41, just beyond. Along the right hand wall are Intertype machines 28, and just in from them are ad cabinets 29. Centrally located on this side are the proof presses 35 and 36, for advertising copy. Moving out into the room, to the left, are the daily layout tables 37.

A little more to the left is the straight matter dump 12, and proof press 14. At this point in the room, advertising from the right and editorial matter from the left meet.

Note that the approximate center of the room is kept clear for trucks, and that a wide land, a sort of a "Main Street," extending toward the mat rollers 45, provides ample space for traffic to and from the stereotype department.

1—Superintendent's Office
2—News Copy Desk
3—Headletter Intertypes
4—Headletter Type
5—Headletter Type
6—Straightmatter Intertypes
7—Straightmatter Linotypes
8—Machinists' Bench
9—Machine Parts Locker
10—Magazine Rack
11—Drinking Fountain
12—10 ft. Machine Dump
13—Supporting Columns
14—News Proof Press
15—Saw-Trimmer
16—8 ft. Table
17—8 ft. Copy Stone
18—Makeup Tables
19—Makeup Trucks
19a—Sports Makeup Table
20—4 ft. Table
21—Magazine Rack
22—Classified Makeup
23—Sunday Makeup
24—Reid Page Storage Cabinet
25—Proof Room
26—Monotype Caster Room

AD ALLEY SECTION

27—Dispatch Room
28—Ad Alley Intertypes (6 with Mohr Lino-Saws)
29—Ad Cabinets
30—Drinking Fountain
31—Magazine Rack
32—Mitreing Machines
33—Saw-Trimmers
34—Rotogravure Type Storage
35—Proof Press
36—Page Proof Press
37—Ad Tables
38—High Base Cabinet
39—Machinists' Bench
40—Rouse Band Saw
41—Copy Hook Stone
42—Ad Desk and Markup Table
43—Ad Makeup Table
44—Ad Makeup Table
45—Goss Giant and Scott Mat Rollers

machines to trucks waiting in the garage outside. Two automatic mailing machines, each with a capacity of 15,000 stencil impressions per hour take care of the entire mail circulation.

The mailing room employs 38 men for the daily paper and 82 on Saturday night when the Sunday paper is being put out. An indication of how well the men are equipped and how efficiently they work may be gained by the approximate circulation figure of 240,000 daily and 190,000 Sunday.

First Floor Grouping

The departmental grouping on the first floor consists of circulation department, pressroom and mailing room. On the second floor are grouped the composing room, advertising dispatch room, advertising department, promotion department, stereotype department and proofroom. The office of the Mechanical Superintendent is also just off the composing room on this floor.

(*Continued Next Page*)

A.N.P.A. Mechanical Committee Personnel

Following is the revised personnel of the A.N.P.A. Mechanical Committee, following expiration of membership terms of three members of the committee and consequent appointment of three new members to replace those who resigned:

F. H. Keefe, Newburgh-Beacon *News*, Chairman

Tennant Bryan, *News-Leader*, Richmond, Va.

John A. Burke, Gannett newspapers, Rochester, N. Y.

A. H. Burns, New York *Herald Tribune*

George Geist, Cincinnati *Times-Star*

Leslie J. Griner, Youngstown *Vindicator*

Maurice A. Hagan, Philadelphia *Inquirer*

Leon A. Link, Cleveland *Plain Dealer*

Donald P. Miller, Allentown (Pa.) *Call-Chronicle*

Russell B. Miller, Bloomington *Pantagraph*

Walter Ogden, Cleveland *Press*

John W. Park, Chicago *Tribune*

D. H. Parker, Montreal *Star*

F. W. Schaub, Decatur *Herald & Review*

John J. Shea, Hearst Newspapers, New York

F. L. Yeager, Indianapolis *Star*

By reason of their terms of membership on the committee having expired, the following have resigned: Wm. L. Fanning of the Westchester County Publishers, Yonkers, N. Y.; Howard J. Lamage of the Williamsport (Pa.) *Grit*; Sam H. Kauffmann, Washington (D.C.) *Star*.

W. E. Wines is manager of the A.N.P.A. Mechanical Department and D. H. Boyce is Mr. Wines' assistant.

Composing Room

The composing room is spacious, occupying 7752 sq. ft. of floor space, and has been laid out so there is a minimum of back-tracking or cross-traffic in the ad, news and makeup departments. The composing room is in charge of Superintendent Fred Curle. G. W. Wraggett is chief machinist. This department is equipped with 25 Intertypes (4 of which are new), 7 Linotypes, 2 Monotype Giant Casters, 3 Monotype Strip Casters, 18 type cabinets, 18 storage and makeup cabinets and 100 individual lockers for those holding the 73 regular situations and 47 substitute jobs. An interesting part of the equipment is the Wm. Reid & Co. automatic lift storage cabinet in which made-up forms may be placed in advance of publication date, thus making it possible to have pages ready without taking up the floor space needed for trucks. Thirty-two extra chases facilitate preparation of pages without tying up trucks. Eight Mohr Lino-Saws (6 on the ad machines) are in use as are both Monomelt and Margach feeders on the composing machines.

Fluorescent lighting in the ad room and over the makeup stones keeps pace with the thoroughly modern trend in all departments. Composing room ceilings have been given acoustic treatment to reduce noise to a minimum.

An electric tabulator automatically and simultaneously shows in the pressroom, stereotype department and composing room, what page makeovers there are for the next edition. There is also a communicating system of microphones between the various editorial offices, the advertising departments, advertising dispatch room and the composing room.

From the advertising dispatch room, ad copy has moved out to the markup desk and into the hand of machine operators and makeup men. Ad composition machines are conveniently located in relation to work top and tables, and the various operations progress with a minimum of back movement. Made-up pages move in smooth production flow. Down a wide, centrally located alley they are rolled to enter the stereotype department.

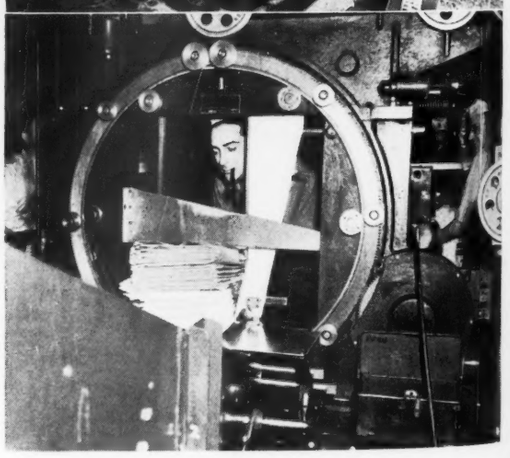
Stereo Department

The made-up pages receive the attention of J. H. Hopf and the 15 men working under his direction in the stereotype department. This department occupies 2532 sq. ft. of space and is, like the other departments, provided with modern equipment to do its work quickly and well.

Stereotype equipment includes two Wood automatic casters, with a capacity of 8 casts per minute, working out of two 6-ton pots heated and controlled by Kemp immersion gas system. Sta-Hi Mat Formers with pre-heaters are used. Also, in this department are two molding machines, a Giant Goss and a Scott. There is complete equipment for doing both curved plate and job work as well as smaller diameter color plates for the

(*Continued on Page 38*)

One of the Wood Automatic Autoplate Stereotype Plate Casting Machines in Minneapolis Star-Journal plant.



Twenty-six a minute — that's the speed of this Signode Tying Machine, one of three used in Minneapolis Star - Journal Mailing room.

Illinois Conference *for Newspaper Mechanical Executives will be held in Springfield, Ill., Sept. 28-30*

THE 1940 Illinois Newspaper Mechanical Conference will be held in Springfield, Ill., on Saturday, Sunday and Monday, September 28, 29 and 30. Program arrangements are as yet incomplete, but the following tentative outline has been furnished by Director Russell B. Miller, Mechanical Superintendent of the Bloomington (Ill.) *Pantagraph:*

Saturday, September 28 — Arrival of mechanical executives. General get-together from 7:30 to 11:30 p.m.

Sunday, September 29 — 9 a.m., Call to Order by President Mintun. At 10 o'clock, Editor of the Springfield *Register* and Publisher A. W. Shipton of the *Journal*, will address the mechanical executives. Sunday afternoon, September 29, will be devoted to departmental meetings for Composing Room, Photo-engravers, Pressroom-Stereotype departments and the Machinists. A banquet will be held Sunday evening.

On Monday morning, September 30, the meeting will be called to order at 9:30 o'clock. *Engraving Film* will be discussed. At this time, a well-known speaker will talk on typography. Afterwards, the various group chairmen will make their reports on the highlights of the departmental meetings.

Monday Afternoon, September 30, will be the last session. Committees will report, next conference city and officers will be selected.

Officers of the Illinois Newspaper Mechanical Conference are: President, Harold Mintun, Production Manager, Decatur Newspapers, Inc.; Vice President, Howard M. Colton, Pressroom Superintendent, Bloomington *Pantagraph*; Secretary-Treasurer, Edward S. Nagel of Champaign *News-Gazette*, Inc. Directors are: Russell B. Miller, Mechanical Superintendent, Bloomington *Pantagraph*; E. L. Bailey, Pressroom Superintendent, Alton *Evening Telegraph*, and Harry Pottle, Machinist, Chicago Plant of Western Newspaper Union.

S.N.P.A. *Eastern Division Mechanical Conference to be held at Birmingham, Ala., Sept. 16 and 17*

THE fourth annual mechanical conference of the Eastern Division of the Southern Newspaper Publishers Association will be held at Hotel Tutwiler, Birmingham, Ala., Monday and Tuesday, September 16 and 17. Announcement to this effect was made by Secretary-Manager Walter C. Johnson of the Association.

Fred C. Connell, Superintendent of the Atlanta *Constitution* is chairman of the Mechanical Committee. Superintendent W. A. Carns of the Birmingham (Ala.) *News* and *Age-Herald*, is local chairman of the Committee on Arrangements.

Other members of the Mechanical Committee are T. C. McLemore, Mechanical Superintendent of the Mobile (Ala.) *Press-Register*; Henry M. Duke, Mechanical Superintendent, Charleston (S.C.) *News* and *Courier and Post*; R. R. Fulton, Pressroom Superintendent, Roanoke (Va.) *Times* and *World-News*; C. Frank Mann, Composing Room Superintendent, Louisville *Courier-Journal* and *Times*; Claude L. Baker, Composing Room Superintendent of the New Orleans *Times-Picayune*; W. B. Astor, jr., Stereotype Superintendent of the Memphis (Tenn.) *Commercial-Appeal*; E. O. Aslinger, Photo-engraving Superintendent of the Atlanta (Ga.) *Georgian*.

Aside from the main technical sessions, one of the features of the Conference will be a dinner given by the manufacturers and suppliers representatives on Monday evening, September 16, at 7 o'clock. Manager John L. Davis of the Mergenthaler Linotype Company's New Orleans Agency, is in charge of arrangements for the dinner. An equipment and supplies exhibit will also be held.

Various departmental committee chairman, including C. Frank Mann, of the Louisville *Courier-Journal* and *Times*, have sent out notices to various mechanical executives within the S.N.P.A. jurisdiction, requesting that members submit production and mechanical topics for discussion at the Birmingham Conference. These topics are to be sent to Secretary-Manager Johnson, P.O. Box 1071, Chattanooga, Tenn. After receipt of the topic questions, the program will be made up for the Birmingham Conference.

Past S.N.P.A. Eastern Division Mechanical Conferences have been strictly informal in character, production and mechanical executives discussing topics from the floor as announced by the chairman. No stated speakers have ever been scheduled. Each half-day session is divided promiscuouly into periods for discussion of topics related to newspaper mechanical departments. In this way, complete attendance at all of the sessions is maintained, because executives cannot anticipate when topics about the particular department in which they are interested will be taken up.

Line-Composing Machine Rolls

The elongation properties of the rubber roll announced by Linograph Corporation for line-composing machine keyboards is said to be 700% as compared with the elongation of the usual rubber roll, the elongation properties of which are approximately 300%. Manufacturer states the material which is used in Linograph rolls is a specially compounded pure gum having a tensile strength which is 2½ to 3 times that of the company's former roll.

After a year's test-use of the roll, company states, no deterioration has taken place in the life of the rubber making up the roll. On a recent test conducted over a year's period of time, a pair of these rolls were in use on a Teletype-setter-operated machine running at 8 lines per min. "The rolls," states the company, "were removed because of the mechanical perfection required to keep the Teletypesetter working properly, but there would have been several more months of service in the rolls on a manually-operated line-composing machine."

The company reports that in carrying on its experimental work, one of the difficulties encountered was to provide a roll which would stand the heat such as is caused by the rheostat for the electric metal pot where the rheostat is mounted beneath the keyboard. This difficulty now has been overcome.

Look Good Enough to Eat

COLORS have a strong appeal to the senses. Most of us seem to be extremely sensitive to them with reference to taste and appetite. From data gathered by the Color Research Department of the Eagle Printing Ink Company, Division General Printing Ink Corporation, it seems apparent that certain colors look good enough to eat, while others are quite distasteful.

The most appetizing hues are a warm red, orange, a warm yellow and a true green. Browns, tans and creams also rank high. On the other hand, purple reds, violets, blues, yellow-greens and lemon yellows fail to suggest savor. Tinted colors like pink and lavender appear definitely sweet. Most deep hues, brown excepted, seem to lack appeal.

Concludes Eagle's Research Department: "From these data — which are a part of the psychological makeup of most of us — it is logical to conclude that where foods are concerned, edible colors ought to be featured in packages, posters and other printed matter. A package that looks good enough to eat surely will help sell the product it contains."

EQUIPMENT

(*Continued from Page 21*)

purchase as many extra figure fonts as he may need.

Still another novelty in the packaging of ATF Spartan is the blanking out of short lines with extra characters instead of wood blocks.

ATF will watch the industry's response to these innovations, states Mr. Powell, and if they meet with the approval indicated by preliminary tests, it is probable that the new plan will be gradually extended to the packaging of all ATF faces.

Precision Knife Grinder

A newly designed 100 in. Seybold Precision Knife Grinder has been announced by the Seybold Division of Harris-Seybold-Potter Company. Manufacturer states this is a high-speed machine with automatic grinding wheel feed and centrifugal pump cooling system, removing a minimum of metal to produce a true cutting edge that requires little honing. It grinds shear blades or beveled knives, paper cutter knives, doctor blades and almost all straight knives in general use.

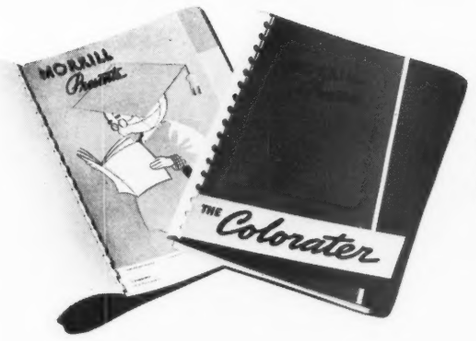
Unique feature is a hollow three-sided knife bar, each surface presenting a different series of angles to the action of the traveling grinding wheel. A fourth open side makes it easy to bolt or clamp various types of blades to the bar.

On the surface of the knife bar where most of the grinding of paper cutting knives is done, the stud-nut principle for fastening the clamps has been retained. This provides a definite position for the clamps and permits uniform spacing.

In designing the new machine, special consideration was given to shear blade grinding. A variety of sizes can be accommodated and up to 6 in. widths can be ground satisfactorily.

All gears and clutch operate in an oil bath, to insure quiet performance. Only the floor space occupied by the base is required for operating the grinder.

The new Knife Grinder is made in three standard sizes — 70 in., 100 in. and 128 in. lengths and other sizes to order.



Miniature reproduction showing cover and one inside page of the Colorater, just published by Geo. H. Morrill Div., of General Printing Ink Corporation.

The Colorater

Presented in 6¾ in. by 9 in. size, plastic binding, Geo. H. Morrill Co. Div. of General Printing Ink Corporation has published an ink book which is entitled *The Colorater*. The book is divided into seven sections as follows: 1, Job Inks; 2, Bond Inks; 3, Sil-Vor Plate; 4, Morr-Glos Inks; 5, Process Colors; 6, Dullset Inks, and 7, Poster Inks.

Of interest to production executives in selecting inks is the technical information, or characteristics, at the bottom of each page. For instance, Job Ink AM 5791 is listed as being opaque, fairly permanent, is water resisting, OK in paraffine, is alcohol resisting, not alkali resisting.

Plates for illustrating the colors have been made so as to show blocks in solid, halftone and quartertone for comparative purposes.

The bond inks are demonstrated by printing letterhead designs in color on bond paper. Dullset inks are printed from rubber plates.

One of the unique sections of the book is that devoted to the printing of process colors in different sequence from the same plates and with one exception the same inks. The difference is shown in appearance by running yellow, red, blue and black in that order, then for comparison running the black plate first down and finishing with transparent yellow.

A copy of *The Colorater* will be sent to production or mechanical executives upon request to the company direct or in care of *Printing Equipment Engineer*.

Mergenthaler Matrix Faces

"This recently completed series of Spartan Medium with Italic is now available in sizes from 6 to 24 point, inclusive," says C. H. Griffith, Linotype's vice president in charge of typographic development, "complements series of Spartan Heavy with Italic, Spartan Black with Italic, Spartan Light with Medium, and Spartan Heavy with Medium. All of the Spartan faces are being used by newspapers, book and commercial printers, and advertisers. Spartan Duplicate is also being used by designers of food-store advertising."

ABCDEFGHIJKLMN
ABCDEFGHIJKLMN
abcdefghijklm1234
abcdefghijklm1234

18 Point Spartan Medium with Italic

"The unit count of the Memphis Extra Bold Condensed with Gothic No. 13 series," says Mr. Griffith, "makes it possible to present a comparatively large amount of copy in comparatively heavy lines in small space, as in food-store and similar forms of advertising."

ABCDEFGHIJKLMNOPQRSTUV
ABCDEFGHIJKLMNOPQRSTUV
abcdefghijklmnopqrstuv123¾
abcdefghijklmnopqrstuv123¾

Memphis Extra Bold Condensed with Gothic No. 13

Paper cutting machine knife being clamped into position on the knife bar of the new Seybold Precision Knife Grinder. Machine is made in sizes ranging from 70 in. to 128 in. length or may be obtained in special sizes.

Champlain New President

Fred L. McCarty has been named president of Champlain Corporation, Garfield, N. J., a subsidiary of Interchemical Corporation. Champlain Corporation manufactures press equipment. For a number of years Mr. McCarty was president of R. Hoe & Co., Inc.

The Answer To America's Demand For Better Printing

The KLUGE AUTOMATIC PRESS

With Kluge's Patented "Selec-Tone" Inking System

BRANDTJEN & KLUGE · INC.
MANUFACTURERS · SAINT PAUL, MINNESOTA

LETTERS TO THE EDITOR

Hidden R.O.P. Color Costs

I ONCE heard a funny story that has an application to our present newspaper r.o.p. color advertising. The story had to do with an old darky who had gone into the business of raising hogs for the market. Meeting another old darky one day, he was asked how he and his brother pig-raisers were doing in the new venture. The first darky said: "Why, we buy them pigs in the spring for 25c a pound and then feed them all season and sell them in the fall for 20c a pound." "Why," says the second darky, "you all ain't making any money" and the first one said: "We found that out."

Newspapers today are not making any money on r.o.p. color ads for about the same reason. The hidden costs attendant on this type of advertising, in nine cases out of ten, are not brought close enough to the surface to give the publisher a full report on the expense added for color operation.

In the pressroom alone such costs as wiping rags, ink wastage, labor for cleaning fountains in and out of the job, slower production, added pressroom waste, etc., will absorb any added rate charge that so far has been made. The only real advantage from the publisher's standpoint is added lineage that otherwise might be lost entirely.

In no operation I know of are detailed expenses kept of *all* the added production costs involved in a color ad. Some publishers "kid" themselves with the thought that there is no cost out of line with the income on such work. A careful check, however, will show that many of the following things enter into the production of r.o.p. color printing.

Assuming that the plates can be put through the regular routine without added labor or cost, yet when the plates reach the pressroom costs pile up. Fountains must be either cleaned or auxillaries must be placed on the press. With auxillary fountains, the greatest departure from preparation expense is made. These, though, cost several hundred dollars each and must be amortized off the income. Ink lost in cleaning is another and a large item if existing fountains or pumps are used. Extra men to clean these fountains nearly always must be employed outside the regular run.

Oftimes, the page size due to the color run compels a collect run with, in some cases, an increase in the pressroom payroll of 100% for the day. In some offices the regular edition schedule compels the employment of an added or skeleton crew to prepare the press for the run. In any event, the added color in most cities means an added man per press per color.

Waste due to registration, while often not appearing on pressroom production reports, is still there and just as expensive as though it were brought to light. Waste on the run is bound to be greater. In the writer's opinion, with the same advantage in paper quality color waste will exceed a straight black run all the way from 25% to 40%. Some publishers question this by making a comparison between straight black runs and runs with color showing no increase. However, close checking may show the color figures were from a good run-of-paper stock and the black from a poor one.

Production is bound to be slowed down some and missed mails with lost subscriber and reader interest is a vital though hidden loss. Adding at least one press crew on the more complicated color runs is imperative in the average large office if these difficulties are to be avoided and schedules are to be maintained together with printing quality.

Color in our daily newspapers is a great step forward in the telling of the seller's story but we believe the advertiser should pay sufficient to allow the publisher some profit — a condition that does not exist with the present rates charged by most newspapers.

Yours truly,
R.O.P. Color

EXECUTIVE ¶s

Herbert Lind, formerly chief composing room machinist at the Cleveland *Plain Dealer*, is now associated with the American Typesetting Company at 547 South Clark St., Chicago.

Frank O. (Offset) Sullivan, well known pioneer in offset-lithography, passed away June 30 in Roselle Park, N. J., at the age of 69 years.

Since the ownership of the Detroit *Free Press* passed into the hands of John S. Knight, Earl Woodard, formerly Mechanical Superintendent of the Knight-owned Akron *Beacon-Journal* has been appointed to that capacity at the Free Press. Henry Lentz was subsequently appointed composing room superintendent of the *Free Press*.

General Superintendent Chas. F. Mignerone of the World Color Printing Company, St. Louis, has been elected to a vice presidency of the company.

Sales Manager George Watrous of the Duplex Printing Press Company, Battle Creek, Mich., is now general manager. He will continue as sales manager.

Fred Alexander is now photo-engraving superintendent of the Cleveland *Press*, he having succeeded Tom Godfrey, who was retired several months ago.

I. J. Chalifoux has succeeded Herbert Lind as chief composing room machinist of the Cleveland *Plain Dealer*, it was announced recently by Composing Room Superintendent Deo Padgett. Mr. Chalifoux came to Cleveland from the Milwaukee *News-Sentinel*.

Mechanical Superintendent Leven Deputy of the Dallas (Tex.) *News*, has been elected a vice president of the Dallas Craftsmen's Club.

William Brahney, formerly with Consolidated Press & Printing Company, Cleveland, has been appointed plant superintendent of Cadillac Press, Cleveland.

H. L. Foster, formerly mechanical superintendent of the Minneapolis (Minn.) *Star-Journal*, is now serving in the same capacity at the Minneapolis *Tribune*.

Fred Curle has been promoted from foreman to composing room superintendent at the Minneapolis *Star-Journal*. No successor has been appointed.

Composing Room Foreman George Englund has left the employ of the Minneapolis *Star-Journal* and has taken up duties at the *Tribune*.

Ray Leach, Composing Room Superintendent of the Omaha *World-Herald*, was killed instantly in an automobile accident which took place near Columbus, Neb. in July. Successor has not yet been appointed.

New ATF Executive

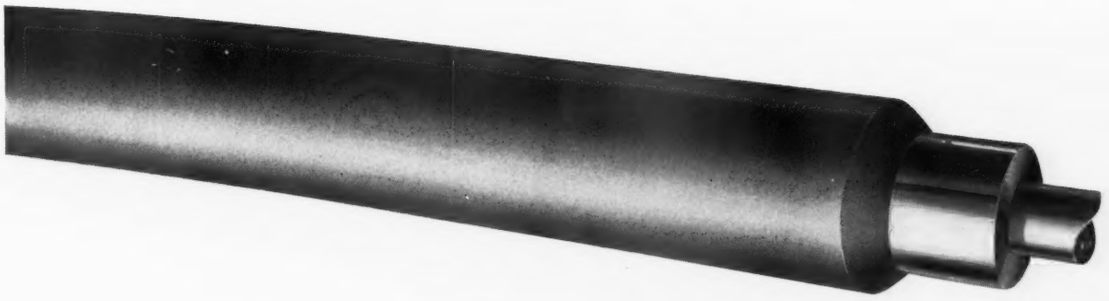
The appointment of C. D. Proctor as manager of the Sales Development Department of American Type Founders, Inc., is announced by Vice President Frederick C. Heitkamp. Mr. Proctor will fill the vacancy in ATF's staff caused by the resignation of Harold Kathman. Mr. Kathman has acquired a farm at Preston, Md., where he will do literary work.

C. H. Proctor, ATF's New Sales Development Manager.

Mr. Proctor comes to ATF from the American Sales Book Company where he has been promotion manager since 1933. His appointment with ATF became effective as of August 1, 1940.

Tours Four States

Howard N. King, typographic consultant for Intertype Corporation, will address craftsmen and advertising clubs in Iowa, Kansas, Nebraska, and Missouri during the month of September. His schedule is as follows: On the 9th at noon he will address the Kansas City, Mo., Advertising Club and in the evening the Kansas City Craftsmen's Club. He will speak before the Des Moines Ad Club at noon on the 10th and the Des Moines Craftsmen the same evening. Wednesday evening the 11th, he will be with the Omaha Craftsmen and Ad Club, and Thursday evening the 12th he will address the Topeka Craftsmen. On the evening of the 13th he will speak before the Waterloo, Iowa, Craftsmen.



This SOFTER roller gives you

BETTER PRESSWORK

FEATURES
which promote economy and good printing

1. Efficient and uniform distribution of ink — at all speeds.

2. Unaffected by heat, cold, or humidity, or by sudden changes of temperature.

3. Less resetting. Many Vulcolastic Rollers have run for two years and more without resetting.

4. Easier to set and the setting is lighter. Hence . . . no roller jumps, better printing, less ink consumption and less wear.

5. Regrinding of Vulcolastic Rollers — at long intervals — is only a polishing operation.

6. Durability. Some Vulcolastic Rollers are starting their eighth year of splendid service.

7. Finally, in case of fire Vulcolastic Rollers will not support combustion. Some newspapers today are refusing to buy rollers which do not have this characteristic.

Vulcan's non-rubber VULCOLASTIC ROLLERS are literally only half as hard as rubber rollers, with a laboratory test reading of 20 as compared with 40 for rubber. This makes possible a very light setting against the printing plate, with many resultant advantages as listed herewith. Vulcolastic Rollers are doing a fine job in some of the country's best newspaper pressrooms . . . and the savings effected by their durability can't be ignored. Write for full particulars and recommendations.

VULCAN PROOFING COMPANY
First Ave. and Fifty-eighth St., Brooklyn, New York
Sales Representatives in Principal Cities

VULCAN

EMPLOYMENT AND SERVICE

Employers, production and mechanical executives may insert notices in this department. Items may pertain to the following subjects: "Executive Wanted," "Association or Partnership Wanted," or "Position Wanted," readers referring to subjects of a personal nature such as obtaining information about addresses of executives, supplying copies of technical articles and magazines, patents for sale or requests for contacts for developing and/or financing of inventions.

Any reasonable request from an employer or mechanical executive for the printing of a notice upon a subject other than the ones listed above will be granted.

Notices may be printed under the following regulations: First insertion (maximum six lines) is free of charge. All subsequent insertions of the same item subject to a charge of 75c per line in advance.

Address all communications with box number to *Printing Equipment Engineer*, 1276 West Third St., Cleveland, O.

MECHANICAL SUPERINTENDENT

— Middle-age, practical in all branches, successful background in some of the largest and best equipped plants. Capable of assuming full charge either publication or commercial. Can reorganize, install systems, improve quality, cut costs, and produce results. Reply Box 93.

EQUIPMENT SALES

Offset Presses to Far East

The news today being so saturated with reports of chaotic world conditions, a new note will be struck when it is stated that business "behind the lines" goes on in the usual manner — as evidenced by the fact that three single color 35 x 45 offset presses just started on their way to Hongkong, China. These orders have been placed with the Harris-Seybold-Potter Company through the Company's Far East representative, The California Ink Company of San Francisco.

Install Hoe Curved Molds

Reports R. Hoe & Company, the latest addition to the newspapers using Hoe Curved Casting Molds is the Spokane (Wash.) *Spokesman-Review*. The two machines recently installed are of the duo-cooled vacuum type built for the production of standard $\frac{7}{16}$ in. plates with ribs.

Cushman Sales

Cushman Electric Company, Concord, N. H., reports additional order for 22 line-composing machine motors in the United States Government Printing Office, Washington, D. C.

Chicago Tribune Press Order

Production Manager John Park of the Chicago *Tribune*, announced recently that the *Tribune* in June purchased 32 Goss high-speed black and white press units with six double folders, six color-printing units, and six half units for printing the reverse side of the color web. All of the presses will be equipped with alternating current drives and special brakes and controls. This installation is scheduled for service about January 1. When all of the new units have been installed the *Tribune* will be operating 116 news press printing units, 16 of which can be used in high-speed color printing. The new equipment, including auxiliary machinery and foundation changes, will cost $1,300,000, it is estimated.

Intertype Sales

One or more Intertypes have recently been ordered by the following: Vineland (N. J.) *Times;* Norfolk (Va.), *News-Index; Daily News*, New York; Auburn (N.Y.) *Press;* Thos. Doran Company, White Plains, N. Y.; The Fred Hahne Printing Co., Webster City, Iowa; West Publishing Co., St. Paul, Minn.; McClatchy High School, Sacramento, Cal.; Jacobsen Linotype Co., Des Moines, Iowa; Mrs. K. T. Harper, Chicago, Ill. E. Laub, Los Angeles, Cal.; Geiger Press, New York; Pittsburg (Cal.) *Sentinel;* Good News Publishing Co., Chicago, Ill.; Ace Typesetting Co., Akron; Barad-Perry Printing Co., Providence, R. I.; Bay City (Mich) *Times; The Church World*, Portland, Me.; Federal Typesetting Service, Philadelphia, Pa.; *Tri-City News*, Cumberland, Ky.; Union Co-operative Publishing Co., Kenosha, Wis.; The River Plate Supply Co., Buenos Aires, A. R., S. A.; Lettergieterij, Batavia, N. E. Indies, Lettergieterij, Curacao, N. W. Indies; Carlos Rohl & Co., Caracas, Venezuela, S. A.; Sociedade Technica Bremensis, Rio de Janeiro, Brazil, S. A.; Daniel Pelaez, Medellin, Colombia, S. A.

Stereotype Equipment Sales

Sta-Hi Corporation reports the following recent installations of Sta-Hi Formers: The Boston (Mass.) *Herald-Traveler* has installed a total of four of the new Sta-Hi Master Formers, and the Boston *Globe* has added a second machine of this model. Other Master Former installations include the Superior (Wis.) *Telegram*, the Canton (O.) *Repository*, the Chester (Pa.) *Times*, the Syracuse (N. Y.) *Herald-Journal*, the Omaha (Neb.) *World-Herald*, the Miami (Fla.) *Herald*, the Akron (O.) *Beacon-Journal*, the Pittsfield (Mass.) *Berkshire Eagle*, the Montreal (Que.) *Star* (2 machines), the New Bedford (Mass.) *Standard-Times & Mercury*, the Portland (Ore.) *Journal*, the Los Angeles (Calif.) *Herald & Express*, and the *A. E. Munyer Electrotype Co.*, of Brooklyn, N. Y., which is doing the stereotyping for PM, the new evening tabloid newspaper in New York. the *Christian Science Monitor* of Boston, has purchased and installed the Master Former which Sta-Hi Corporation had on exhibit at the Chicago ANPA Mechanical Conference in June. *La Nacion* of Beunos Aires recently added a second Sta-Hi Autoformer, and the Warren (O.) *Tribune-Chronicle* has installed an Autoformer. Recent Junior Former installations include the Kenosha (Wis.) *News*, Butler (Pa.) *Eagle*, Sharon (Pa.) *Herald*, Johnstown (Pa.) *Tribune*, Monterey (Calif) *Peninsula Herald*, Beloit (Wis.) *Daily News*, and Ogden (Utah) *Standard-Examiner*.

Linotype Installations

Sixteen Linotypes have been added by the Philadelphia (Pa.) *Record*.

The Washburne Trade School, Chicago, has installed five Blue Streak Linotypes.

One or more Linotypes have been installed by the Macon (Ga.) *Telegraph* and the *Evening News*; Canton (O.) *Repository;* Utah Printing Company, Salt Lake City; Commercial Typesetting Company, Cleveland; American Bank Note Company, Boston; Hagerstown (Md.) *Globe;* Moody M. Irwin, Heber Springs, Ark.; Artcraft Advertising Company, Wichita Falls, Texas; North Carolina State College Print Shop, Raleigh, N. C.; Wilmington (O.) *News-Journal*; Holly (Mich.) *Herald;* Old Colony Press, Norwood, Mass.; Seminole (Texas) *News;* Hartford (Conn.) *Times;* Mary E. Febringer and Cletus L. Febringer, Dupo, Ill.; Bloomsburg (Pa.) *Morning Press;* Wistar Institute, Philadelphia, Pa.; Jefferson Printing Company, Ensley, Ala.; Leyden Press, Plymouth, Mass.; Hurley Printing and Stationery Company, Camden, Ark.; Appleton (Wis.) *Post-Crescent*; New Britain Typesetting Company, Inc., New Britain, Conn.; Long Publications, Kermit, Texas; Vancouver (B. C.) *Sun*.

Eleven Linotypes have been ordered by the United States Government Printing Office, Washington, D. C.

Other Linotypes have been installed by Long Publications, Kermit, Texas; J. C. Hall Company, Pawtucket, R. I.; Allentown Call Publishing Company, Allentown, Pa.; Harry E. Campbell, Berwick, Pa.; Specialty Printing Service, Cleveland, O.; Campfield Printing Company, Staunton, Va.; Southern Digest, Scotlandville, La.; University of Oklahoma, Norman, Okla.; Montgomery (W. Va.) *Herald;* Niles (O.) *Daily Times;* Tangipahoa Publishing Company, Inc., Ponchatoula, La.; Princeton (Ky.) *Press;* Bethlehem (Pa.) *Globe-Times;* Exira (Iowa) *Journal;* Bowling Green (Ky.) *Times Journal;* Federalsburg (Md.) *Times;* Waldoboro (Maine) *Press;* Rochester (N. Y.) *Times-Union;* Kewanee (Ill.) *Star-Courier;* J. Klein & Sons, Registered, Montreal, Quebec; L'Action Populaire Joliette, Quebec.

Batting for Palmer

Tore Hellstrom, who is assisting William H. Palmer, Linotype's representative in Maine and parts of Massachusetts, New Hampshire and Vermont, has had considerable experience in the graphic arts. Commencing with the fall of 1937, Mr. Hellstrom served for two years as a special Linotype representative in Finland, Estonia, Norway, Denmark and Holland. Last fall he served a while in the Swedish army, and returned to the United States early this year.

Hoe Reports Earnings Gain

R. Hoe & Co., Inc., reports for the quarter ended June 30 a net profit of $104,847 after all charges, including interest, but before income and excess profits taxes, and excluding extraordinary income. This compares with a net profit of $5652 in the previous quarter and a net loss of $74,377 in the June quarter of 1939.

For the nine months ended June 30 net profit from operations totaled $69,215, as against a net loss of $281,427 for the like period of last year.

Unfilled orders at the present time amount to nearly $3,000,000 against $660,000 a year ago.

President Harry M. Tillinghast states the company continues to enjoy a rising trend of business with all divisions participating in the improvement. Press shipments showed a particularly sharp gain in the June quarter, he said, being the best since 1937. Mr. Tillinghast added that the outlook for all divisions of the company continues favorable.

SPECIAL EDITIONS

New London (Conn.) Day

A special tabloid section consisting of 32 pages accompanied the regular 16 page edition of the Monday, July 16 issue of the New London (Conn.) *Day*. The tabloid section was printed on green paper and was composed largely of halftones describing the history and dedication of the new Ocean Beach Park. Pressroom Superintendent George Kent did not tell us at what speed he printed the 32 page section but the presswork is excellent. Composing Room Superintendent Walter Crighton's handling of the layout shows careful craftsmanship.

Mrs. MacNeal Passes

Mrs. Helen Price MacNeal, wife of Robert Kemp MacNeal, Sales Representative of Harris-Seybold-Potter Company, died suddenly on July 11 at the MacNeal summer residence at Beach Haven, N. J. Her husband, her mother, and two daughters, Mrs. Chester B. Harrison of Montclair, N. J., and Mrs. Edward V. Sanderson, of Philadelphia, survive. Burial was in Whitemarsh Memorial Park, Philadelphia.

TOPS IN SAWING EFFICIENCY

TOP SPEED Like the swish of a modern train, the ball-bearing table glides with its work.

TOP ACCURACY Built to Hammond Micrometer precision. Equipped with wear take-ups throughout.

TOP CAPACITY 178-picas to as small as 8 points.

TOP SAFETY Slugs stay locked. Every operation steady and smooth. Operators hands and fingers kept free from harm. Saw blade, grinding wheel, belt and pulleys guarded.

TOP DESIGN A masterpiece of modern engineering skill. Acclaimed the world over as the finest saw ever produced. First in quality and first in sales everywhere.

SAVE YOUR TIME AND MONEY

Do like hundreds of EasyKaster users are doing — actually reduce your casting time as much as 50%

SAVE at least an hour or two each time you heat up your casting box.

SAVE waiting while remelting additional metal between casts.

SAVE holding the press for those last minute ads.

SAVE hand ladling, walking to box and hand pouring.

SAVE wasted time recasting because of dirt or dross in face of cast.

There is no "stop and go" with the Hammond EasyKaster "8"—rather continuous casting with the 800 lb. valve-controlled melting pot.

HAMMOND EASYKASTER "8" WITH 800 lb. POT

Descriptive circulars upon request

★ ★ ★ Hammond Machinery Builders INCORPORATED ★ ★ ★

KALAMAZOO, MICHIGAN, U.S.A.

1604 DOUGLAS AVENUE

The drying rack is two-sided, with 30 radiant energy drying lamps on each side; lamps are controlled in groups of ten for greater economy and efficiency in drying a few sheets at a time. Oscillating fans, 16 in., also aid the drying.

This is one of the graining tables. Four of the 36 in. by 48 in. zinc plates are grained at one time as the table vibrates and rotates the 30,000 steel balls.

Infra-Red Speeds Drying

ZINC sheets that are to be sensitized and used in offset printing must first be grained by rotating steel balls over them with abrasive and water for an hour states *Electrified Industry;* this roughens the zinc surface so that it can be readily sensitized and hold moisture on press. Plates may be used for as many as 15 grainings. After the sheets have been grained they are washed; the grained surface presents a difficult drying problem particularly in damp weather. In normal weather it takes from 15 to 18 minutes for these plates to dry; on a rainy day they ordinarily will not dry at all, become oxidized and spoil. A special drying rack that consists of 30 260 w. infra-red drying lamps in polished aluminum reflectors has been developed for its own use by the National Offset Supply Co., St. Louis. Using this, the sheets can be dried in from 3 to 5 min., regardless of weather conditions.

Ink Making Exhibit

Printer's ink is making its appearance as a new feature of the Du Pont Company's 1940 World's Fair exhibit. A laboratory grinding mill has been installed to mix the color pigments and essential oils. After completion of the ink, it is transferred to the rollers of a small proof printing press upon which souvenir pictures of the exhibit building are run, accompanied by running commentary to visitors.

The demonstration presents one of the important applications arising from an entirely new color development. "Monastral" Fast Blue and Green belong to a family of colors classed chemically as "copper phthalocyanines."

One of the principal uses of "Monastral" Fast Blue is in printing inks as it faithfully reproduces tone values and is considered an excellent trichromatic blue for process printing.

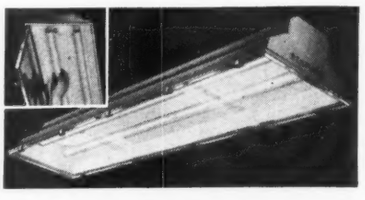
Clever Promotional Piece

Showing its clients just how executives of William E. Rudge's Sons, Printers, New York, try to adapt themselves to the new papers which come upon the market, a promotional piece was prepared from Hamilton Andorra. The folder consists of eight pages, 13 in. by 20, two colors of paper with suitable colored inks for the job. To give the paper a "break" in the eyes of the client, a minimum of printed area in a different position on each page is used so the client may get the optical "feel" of the company's enthusiasm for the new product. The only problem, it would seem, is to preserve the original unwrinkled, unfolded condition of the sheets (via Uncle Sam) until they have been placed in the client's hands.

"Sealed-Flo" Units

The Benjamin Sealed-Flo Units now feature a sealed cover construction which not only protects the fluorescent lamps and reflecting surfaces from dust and dirt, but also extends the use of fluorescent lighting to locations requiring opal glass diffusing fixtures, vapor-proof and dust-tight fixtures, or "unbreakable" glass protection of lamps and reflecting surfaces.

These units provide high levels of glareless light with softly luminous shadows and, in addition, are rated as



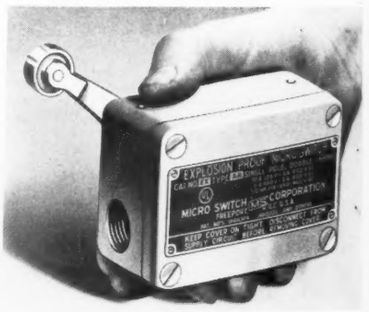
vapor-proof by the Underwriters' Laboratories. The cover is hinged to the lamp housing and is locked in place by means of hand operated cover clamps. When opened the cover hangs straight down. The one piece sealed cover makes it possible to adapt the units for locations where use of heat and impact resisting tempered plate glass covers are desirable or for locations as in engraving rooms where the use of a diffusing glass is indicated.

The units are available in arrangements for either two or three 48 in. fluorescent lamps. Complete details may be obtained by writing for descriptive bulletin No. 10, to Benjamin Electric Mfg. Co., or in care of *Printing Equipment Engineer.*

Explosion Proof Micro Switch

An Explosion Proof switch 3⅝ in. by 2½ in. by 2 in. is announced by the Micro Switch Corporation.

The types of actuation now available are the roller arm with the axis of the roller either parallel to or at right angles to the arm, and a bullet-nose push-rod type. All types have precision characteristics with a maximum movement differential of 0.001 in.



Mounting space minimized by omitting feet or lugs and providing a pair of holes on each of four sides, tapped for 10-32 screws. Where a foot or lug type of mounting is desirable, a universal mounting strap is available.

A removable cover plate provides access to the terminals, which are supported on the switch element itself and accept No. 14 solid wire. The switching unit enclosed within the cast iron housing is rated at 1200 w. up to 600 v., a.c.

Don't Let Your Printing Look Run Down at the PAPER

Just as they notice salesmen's heels, buyers judge an advertiser and his product by the kind of paper that carries his message. Your customer has a good story about a good product, so help it along by running his job on Champion, a paper worthy of what he has to tell and sell. Outstanding quality and good service have made Champion the largest producer of printing papers: Coated and uncoated book, offset, envelope, cardboard, postcard, and cover. In Champion papers you give your customer the best of looks, combined with high quality that stands the grind of hard selling.

THE CHAMPION PAPER AND FIBRE CO., Hamilton, Ohio

MILLS AT HAMILTON, OHIO . . . CANTON, N. C. . . . HOUSTON, TEXAS

Manufacturers of Advertisers' and Publishers' Coated and Uncoated Papers, Cardboards, Bonds, Envelope and Tablet Writing . . . Over 1,500,000 Pounds a Day

DISTRICT SALES OFFICES

NEW YORK • CHICAGO • PHILADELPHIA • CLEVELAND • BOSTON • ST. LOUIS • CINCINNATI

Get a New ATF Diafram GUN

now at lowest prices in ATF History!

Whether Offset or Letterpress ... ask ATF!

NEVER before have New ATF Non-Offset Guns been priced so low. Run high gloss or metallic inks at top speeds without offsetting... no slip-sheeting, sticking or running thin! Aim the gun at any part of the sheet, regulate instantly the shape, width, duration and amount of spray... each job gets exactly the amount it needs. Save on mix and eliminate excessive dust in your plant. Letterpress and offset printers everywhere are speeding up production, cutting costs and increasing profits with ATF Guns. Ask your ATF Salesman for details, or write your nearest ATF Branch.

ATF DIAFRAM GUN—
Portable Compressor Model
(Available in press bracket and pedestal models)

American Type Founders
200 Elmora Ave., Elizabeth, N. J. • *Branches in Principal Cities*

ATF also makes: ATF Type, Kelly Presses, Little Giant, ATF Non-Offset Gun, the ATF Saw, Rubber Plate Machine, and ATF-Webendorfer Offset Presses

Type used:
Stymie Family

TECHNICAL LITERATURE

Monotype-Thompson Type-Caster

Illustrated folder describes the Monotype-Thompson Type-caster and shows one-line specimens of the many matrix faces available for casting on the machine.

Flamenol Bulletin

GEA-2733D Flamenol Bulletin (illustrated) describes Flamenol Synthetic-Insulated Cable for printing press and other printing machinery wiring duty where oil, heat, aging and moisture must be resisted.

Time-Saving Equipment

In H. B. Rouse & Company's latest catalog are illustrated and described the complete line of equipment and accessories made by the company. These include band saws, mitreing machines, sticks, cutters, gauges, page frames, newspaper files and racks, metal bases and other accessories for various departments in the printing plant.

Intertype's New Booklet

Intertype Corporation has just released a new booklet of interest to advertising typographers and newspapers entitled *Intertype Headletter and Display Type Faces*. The booklet contains samples of one-letter faces from 16 to 60 point and two-letter display faces from 16 to 24 point. Copies may be secured by writing Intertype Corporation.

Fluorescent Lamp Guide

Fluorescent Lighting, a guide to the application of Mazda F lamps and equipment, has been published by the Westinghouse Lamp Division.

The 23-page booklet explains how the lamps work and the whys and wherefores of auxiliaries. Answers given to questions asked about d.c. operation, temperature effect in outdoor operation, color, stroboscopic effect, radio interference, lighting costs, and other data.

Ideal Graphic Rollers

Three-way folded bulletin in which is discussed Ideal Roller & Mfg. Co.'s Ideal Graphic Roller — a custom-built non-meltable composition typographic roller. Uses and qualities described.

"Set In Cyrillic"

By writing direct to Lanston Monotype Machine Co., 24th at Locust, Philadelphia, a booklet published by Monotype Corporation, Ltd., London, may be obtained as long as the limited supply lasts. The booklet is entitled "Set In Cyrillic," and is an analysis of the Cyrillic alphabet with information upon the division of words for operators of Monotypes engaged in setting texts in Russian, White Russian, Bulgarian, Serbian and other languages written in the Cyrillic alphabet.

Color Legibility

Eight page folder No. 1, published by Eagle Printing Ink Co., discusses and illustrates *What About the Legibility of Colors?* in relation to posters, packages, books and magazines. Small charts in color illustrate the arguments affecting visibility.

Technical literature described on this page may be obtained by any reader. Send your request to Printing Equipment Engineer.

PRINTING PATENTS REPORT

Covering Patents Issued June 25, July 2, July 9, July 16, and July 23

This data is compiled exclusively for *Printing Equipment Engineer* by Invention, Inc., is verified in the United States Patent Office, and is comprehensive of all patents in the field of each heading continuous from the last published issue of this magazine. For copies of patents listed here, specify the patent numbers and send 10c each (stamps not accepted) to the Commissioner of Patents, Washington, D. C.

Binding, Cutting, Perforating:

2,207,413. MECHANISM FOR STAPLING a plurality of webs passing from a rotary printing machine. Especially for inserting longitudinal staples, the invention deals with mechanism for forming the staples, as well as for applying them to the web. Invented by Cecil George Quick and Reginald William Fowles, London, England. Assigned to R. Hoe & Co., Inc., East River & 138th St., New York, N. Y. Application November 12, 1938. 20 claims.

2,207,604. BOOK, CATALOGUE, OR THE LIKE capable of being filed in the same space as is business correspondence. The book may be filed in open position and placed in a bookcase in closed position, this being made possible by use of a novel second cover appearing in the middle of the book when it is closed. Invented by Lucius E. Whiton, New London, Conn. Unassigned. Application October 12, 1939. 4 claims.

2,208,966. PAPER TRIMMER adapted for corner trimming or for cutting tabs in the edges of sheets or cards of material varying from paper to cardboard or the like. The machine includes fixtures enabling the operator to make adjustments as to size of sheets or size and position of the tabs on the sheets more easily, as well as means assuring that the chips or cuttings fall free, out of the operator's way. Invented by Walter C. Eickman, Dayton, Ohio. Assigned to Harris-Seybold-Potter Co., 4510 E. 71st St., Cleveland, Ohio. Application April 30, 1936. 8 claims.

Composing Room Equipment:

2,206,754. LINE CASTING MACHINE with novel means for automatically stopping the machine after a definite interval of operation. Purpose of the invention is to prevent unnecessary operation, resulting, for instance, from an operator changing from one machine to another. The device is applicable both to machines such as the Linotype and those such as the Ludlow. Invented by Charles J. Rubb, Flushing, N. Y. Unassigned. Application February 6, 1940. 8 claims.

2,207,027. TYPOGRAPHICAL COMPOSING MACHINE of the type employing circulating matrices, and wherein the assembled line is transferred from the assembler to a carrier, the matrices and spacers being subsequently transferred from the carrier to a redistributing mechanism. The invention is particularly concerned with a new structure for transferring the composed line from the assembler to the carrier, and from the carrier to the distributor, and claims to speed up composition by reducing or eliminating periods during which operation of the keyboard must be interrupted during line transfers, etc. Invented by Richard Henry Scott, Enfield, and William Fairall Gorse and Arthur Staniland Hayward, Altrincham, England. Assigned to Linotype and Machinery Limited, London, England. Application May 6, 1939. 11 claims.

2,207,028. TYPOGRAPHICAL SLUG CASTING MACHINE of the type wherein the mold in which the slug, a typebar, is cast is moved rectilinearly after casting to slug ejecting position. The invention provides a new mold for such machines said to facilitate adjustments for change of measure and body size of the slug. Invented by Richard Henry Scott, Enfield, and William Fairall Gorse and Arthur Staniland Hayward, Altrincham, England. Assigned to Linotype and Machinery Limited, London, England. Application May 25, 1939. 8 claims.

2,207,029. TYPOGRAPHICAL SLUG CASTING MACHINE of the "Linotype" type, characterized by simplification of the device employed to operate the vise frame mechanisms, and by greater freedom of access to parts at the rear of the vise frame. Invented by Richard Henry Scott, Enfield, and William Fairall Gorse and Arthur Staniland Hayward, Altrincham, England. Assigned to Linotype and Machinery Limited, London, England. Application May 27, 1939. 21 claims.

2,207,975. PRINTER'S CHASE designed to eliminate many of the steps and material heretofore necessary when mounting a chase about a block. Characterized by provision of novel fasteners for holding bars forming the chase, the invention makes unnecessary untying and retying of the form. Invented by Leonard F. Dourson and Frank A. Kemen, Cincinnati, Ohio. Assigned ½ to S. Rosenthal & Co., Inc., 22 E. 12th St., Cincinnati, Ohio. Application February 8, 1940. 8 claims.

Feeding, Folding, Delivery:

REISSUE 21,489. SHEET OR SIGNATURE GATHERING APPARATUS AND METHOD of the type designed to carry out feeding of signatures from a stack or supply hopper, including insert gathering or saddle gathering. New features provided by the invention facilitate removal of the bottom sheet or signature from a stack, as well as promoting addition of continued supplies to the stack. Invented by Paul E. Kleineberg, Paul Schweizer, and Andrew W. Wilks, Easton, Pa. Assigned to T. W. & C. B. Sheridan Company, 135 Lafayette St., New York, N. Y. Application for reissue March 7, 1940. 39 claims.

2,205,498. WEB SPLICING DEVICE including a supporting shaft having an offset portion to be engaged and rocked by the replacement roll, in case the roll is accidentally moved beyond normal web joining position to prevent damaging interference of the roll with other parts of the mechanism. Invented by Otto Schwars, New York, N. Y. Assigned to R. Hoe & Co., Inc., East River & 138th St., New York, N. Y. Application August 18, 1937. 21 claims.

2,205,867. WEB SPLICING MECHANISM including a novel self-compensating system for braking the shield employed, during bringing of the roll to desired speed, to protect the pasted portion of the web, this braking system being such that deceleration of the shield is proportional to the speed of rotation of the web roll. Invented by Walter C. Scott, Plainfield, N. J. Unassigned. Application November 27, 1937. 18 claims.

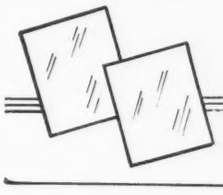
2,205,921. SHEET FEEDING MACHINE including novel means for gauging and controlling the lateral positions of the sheets as they leave the conveyor. According to the invention, the conveyor is disposed at an angle laterally of the machine, and means are provided in the support for varying this angle. Invented by Charles E. Clark, Winchester, Mass. Assigned to The Lindbladh Corporation, Boston, Mass. Application September 24, 1938. 17 claims.

(*Continued Next Page*)

LABORATORY CONTROL ASSURES UNIFORM HIGH QUALITY

Nothing is taken for granted in the production of A-Z Alloy and Zomo Electric Zinc. Samples are cut from sheets from every run of metal. These samples are tested for hardness and given a careful burning-in test. Finally they are put through an etching test in a standard etching machine, duplicating a regular three-bite commercial engraving. Smoothness of etch is then determined by microscopic inspection, with and without the application of dragon's blood. Cast in the electric induction furnace, and carefully checked through every step of production, this final laboratory control gives final assurance of uniform quality, stamina, and smooth, quick etching.

You can now order Zomo Electric Zinc and A-Z Alloy, plain or Backoted from leading metal suppliers in the United States, Canada and England.

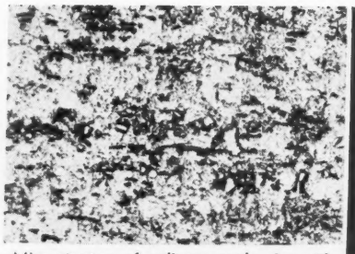


ZOMO ELECTRIC ZINC

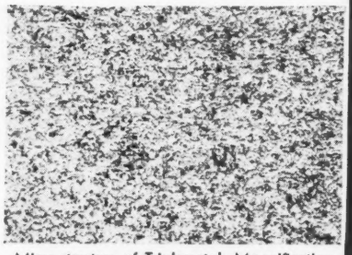
A-Z ELECTRIC ALLOY

Entirely Free of LEAD and IRON

There are definite limitations as to what can be done with photo-engraving zinc because of its texture and the presence of lead and iron. Triplemetal is not merely a hard zinc. It is an alloy with etching qualities far superior to zinc and a hardness very close to copper. Triplemetal gives excellent results on fine line work and halftone screens up to 133. Extra toughness makes Triplemetal far superior to any zinc for matrix work.



Micro-structure of ordinary grade zinc with high iron content, showing inclusion of iron-zinc compound. Magnification 100 X



Micro-structure of Triplemetal. Magnification 100 X. Notice the finer grain structure.

EDES TRIPLEMETAL

TRIPLEMETAL

PAT. APP. FOR

Not zinc — not copper — but a patented alloy of metals for line plates and half-tones in generally used publication screens.

THE Edes MANUFACTURING COMPANY

PLYMOUTH, MASSACHUSETTS, U. S. A.

AUTHORIZED REPRESENTATIVES

CHICAGO: Chemco Photoproducts Co. BOSTON: Allan B. Croke Co. SAN FRANCISCO: Selby Mohr
NEW ORLEANS: Chemco Photoproducts Co. BUFFALO: C. S. Illingworth ATLANTA: Lamar-Rankin Co.
ST. LOUIS: Mid-West Photo-Eng. Supply Co. DETROIT: Eaton-Clark Co. AKRON: Metzger Photo Supply Co.
WASHINGTON, D. C.: E. H. Walker Supply Co. CINCINNATI: G. C. Dom Supply Co.

DENVER MINNEAPOLIS TULSA WICHITA MEMPHIS DALLAS OMAHA Thompson-Hayward
KANSAS CITY OKLAHOMA CITY DES MOINES HOUSTON SAN ANTONIO Chemical Co.

2,206,580. WINDING APPARATUS for use in rewinding printed paper and slip sheet paper. Invention includes a novel equalizing but non-slipping differential gearing device for regulating hardness, etc., of the rewound rolls. Invented by Adolph Potdevin, Garden City, and Robert L. Richmond, Yonkers, N. Y. Assigned to Potdevin Machine Company, 1227 38th St., Brooklyn, N. Y. Application May 27, 1938. 3 claims.

2,206,607. FOLDER FOR WEB PRINTING PRESSES. Adjustable to run with "straight" or "collect," the invention takes care of printed web from interchangeable cylinders without necessitating complicated adjustment of the folder. Invented by Hans C. Jordhoy, North Plainfield, N. J. Assigned to Wood Newspaper Machinery Corp., 688 S. 2nd St., New York, N. Y. Application May 6, 1937. 11 claims.

2,206,868. METHOD FOR PRODUCING WATERPROOF NEWSPAPERS which are delivered from the press with a waterproof sheet of film, etc, as a folded part serving as a cover. According to the invention, the waterproof sheet is fed into the newspaper press in such a manner that it is folded with the newspaper. Invented by Glenn Dean Morgan, Los Angeles, Calif. Unassigned. Application December 27, 1937. 4 claims.

2,207,492. SUCTION GRIPPER for sheet separating and feeding devices. The invention is characterized by use of a rubber hood which carries the suction opening of the gripper body, this rubber hood being provided with one or more suction cups claimed to provide an improved gripping action. Invented by Georg Spiess, Leipzig, Germany. Unassigned. Application February 18, 1928. 2 claims.

2,207,508. SHEET FEEDING MECHANISM FOR PRINTING PRESSES of the so-called lap type. Invention attains increased production and improved register by use of a novel sheet slow-down device. Invented by William K. Eckhard, Westerly, R. I. Assigned to C. B. Cottrell & Sons Co., Westerly, R. I. Application October 11, 1939. 5 claims.

2,208,045. PROCESS FOR EDGE-TO-EDGE PRINTING of envelopes, cards, etc., including the steps of (1) aligning the envelopes, etc., both forwardly and laterally; (2) releasing and advancing to forward register mechanism associated with a printing surface, and (3) maintaining the forward edge of the envelope, etc., flatly adjacent the forward register mechanism while the mechanism is being depressed by the printing members. Invented by Paul H. Durup, Wollaston, and John J. Ormond, Boston, Mass. Assigned to Artographic, Inc., Boston, Mass. Application January 16, 1939. 3 claims.

2,208,304. SHEET FEEDING APPARATUS of the type employed to feed sheets from a supply or pile carried on the feeder, employing pneumatic sheet separating means which is adjustable during operation of the feeder. Operation of the invention is claimed to be such that feeding of the separated sheets is effected without nicking, etc. Invented by Edwin W. Goodwin, New Rochelle, N. Y. Assigned to Dexter Folder Company, Pearl River, N. Y. Application April 15, 1939. 47 claims.

2,208,345. FOLDING, STUFFING, AND SEALING MACHINE. The invention is concerned with improved mechanism for bunching the sheets, and a novel guiding plate to guide the bunch as it enters upon the conveyor. Invented by Waldo E. Rosebush, Millwood, Wash. Unassigned. Application March 1, 1938. 10 claims.

2,208,420. REGISTRATION CONTROL SYSTEM for maintaining alignment between a traveling web of printed paper and a slitting machine. The invention is designed with the object of imparting alignment forces to the web only in proportion to the magnitude of lateral deviation or misalignment of the web. Invented by Finn H. Gullikssen, Williamsburg, Pa. Assigned to Westinghouse Electric & Mfg. Co., Hill St., East Pittsburgh, Pa. Application June 8, 1938. 26 claims.

2,208,978. SHEET DELIVERY MECHANISM with improved means for slowing down the sheets after they reach the pile on the delivery board, before they strike the stops, in order to improve the descent of the sheet to the pile. Claimed to eliminate rebounding of stiff sheets and crumpling of thin sheets, the decelerating device engages the lower or unprinted surface of the sheet, maintaining control after the grippers at the front of the sheet have released. Invented by Charles W. Harrold, University Heights, and Arthur B. Woodruff, Shaker Heights, Ohio. Assigned to Harris-Seybold-Potter Co., 4510 E. 71st St., Cleveland, Ohio Application June 15, 1938. 12 claims.

Miscellaneous:

2,205,985. METHOD FOR DISPERSING PIGMENTS IN FILM-FORMING VEHICLES in the manufacture of paints, inks, lacquers, etc. According to the invention, a colloidal solution of a solid film-forming material is formed in a liquid vehicle, and pigments mixed into this liquid body in quantity sufficient to form a stirrable, pourable slurry, after which the material is treated to increase the dispersion of the colloid. Invented by Alexandre James Lapointe, Louisville, Ky. Assigned to Devoe & Raynolds Co., Inc., 1 W. 47th St., New York, N. Y. Application May 31, 1935. 13 claims.

2,208,587. METHOD OF DRYING PRINTING INKS containing partially polymerized china-wood oil, by exposing the printed surface to the vapors of an active catalyst such as stannic tetrachloride or titanic tetrachloride. Invented by Eugene Kienle, Brooklyn, N. Y. Assigned to American Can Company, New York Central Bldg., New York, N. Y. Application March 11, 1937. 2 claims.

Plate Making:

2,205,998. PLANOGRAPHIC PRINTING PLATE of the cellulosic type. Having a printing face of dense amyloid parchment, a coextensive backing of kraft paper, and an intervening waterproof layer of transparent thermoplastic adhesive, the plate is characterized by confinement of the swelling of the face to a direction normal to the plane of the face. Invented by William B. Wescott, Dover, Mass. Assigned to Addressograph-Multigraph Corp., Wilmington, Del. Application September 1, 1937. 5 claims.

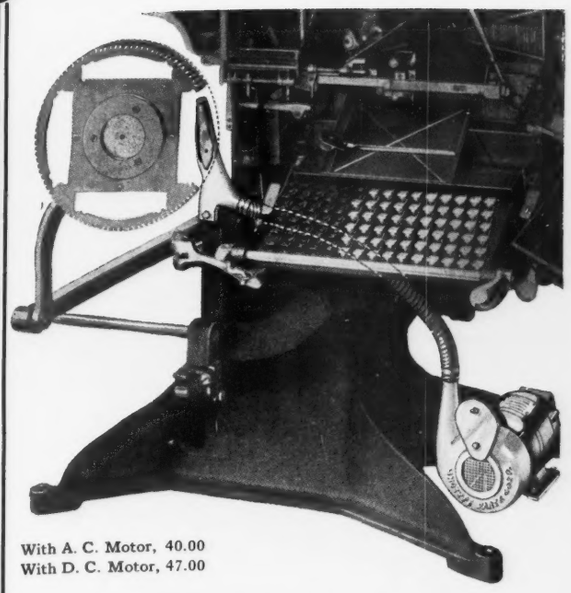
2,206,229. MACHINE FOR GRINDING AND MAKING READY PRINTING PLATES in such a manner that the front side of the plate may be observed during grinding of the back side. Machine has a table for supporting the plate in back-down position, a grinding wheel mounted in a hole in the table, and a reciprocating stamp located above the plate for pressing the plate against the wheel. Invented by Karl Kruger and Lambert Koop, Bielefeld, Germany. Assigned to Fischer & Krecke G. m. b. H., Bielefeld, Germany. Application November 26, 1938. 11 claims.

2,206,290. MANUFACTURE OF PRINTING PLATES BY PHOTOMECHANICAL METHOD. Invention is particularly concerned with a new method of applying acid-resisting ink to the impression areas and sides and shoulders thereof before etching the depressed areas. Object is carried out by applying a film of ink to a thin sheet of metal, and applying the inked face of this metal sheet to the face of the plate, pressure being provided by a pressure roller. Invented by Albert G. Meyer, Maywood, Ill. Assigned to Harold M. Pitman Co., 51st Ave. & 33rd St., Chicago, Ill. Application August 4, 1939. 4 claims.

2,207,265. MACHINE FOR PHOTOGRAPHIC COMPOSITION OF TYPE including an improved master type slide and novel means for focusing the image of the master type upon the plate or film, and for adjusting the focus to control the size of the image. Invented by Ashley G. Ogden, Baltimore, Md. Unassigned. Application February 21, 1938. 11 claims.

2,207,266. PHOTOGRAPHIC JUSTIFYING MACHINE. The invention is mainly concerned with new mechanism for effecting movements of the scanning device. Invented by Ashley G. Ogden, Baltimore, Md. Unassigned. Application April 28, 1938. 43 claims.

(*Continued on Page 38*)



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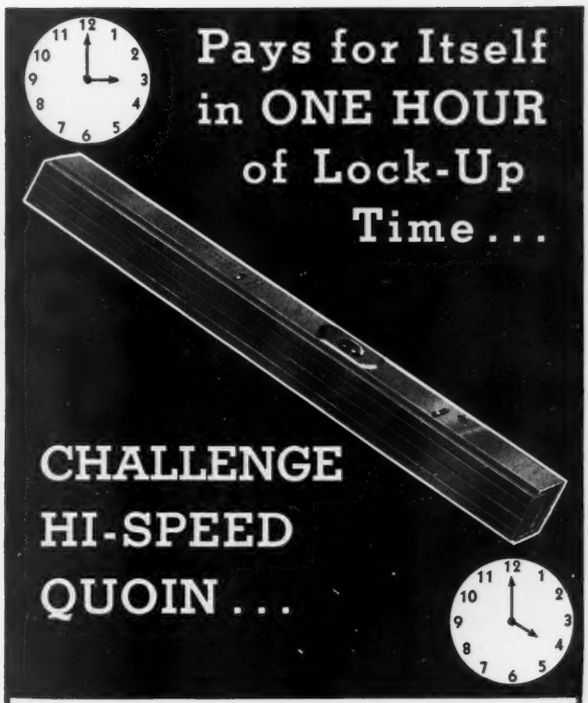

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2,207,388. TRANSFER PAPER FOR PHOTO-MECHANICAL PRINTING and reproduction processes, employing as an intermediate layer between the emulsion and the paper support a composition which does not dissolve in cold water but insoluble in a second bath. This intermediate layer comprises an artificial resin produced by condensing a pheno-xyacetic acid with formaldehyde. Invented by Gerhard von Kujawa, Dessau, Germany. Assigned to General Aniline & Film Corporation, 435 Hudson St., New York, N. Y. Application January 22, 1937. 4 claims.

2,207,449. PHOTOPRINTING APPARATUS with novel means for accurately and successively positioning the transparent negative at a plurality of position above a photo-sensitive metal plate, in order to print a plurality of identical positions on the plate. Invented by Henry V. Baker, Baltimore, Md. Unassigned. Application May 22, 1939. 9 claims.

2,207,993. MACHINE FOR TRIMMING THE EDGES OF SEMI-CYLINDERICAL STEREOTYPE PLATES. For trimming plates having opposite notches in their curved edges, the invention proposes to clamp the plates to a curved support during trimming by means of pins projecting from the support and straps passing over the pins. Invented by Isidor Tornberg, Plainfield, N. J. Assigned to Wood Newspaper Machinery Corp., 688 S. 2nd St., Plainfield, N. J. Application August 10, 1937. 9 claims.

2,208,703. PLANOGRAPHIC PRINTING PLATE prepared from sheet aluminum by heating the aluminum in a hot solution of alkali aluminate to remove grease, and then dipping in an acid bath to remove scum and ventralize any absorbed alkali in the microporous aluminum oxide on the pitted surface. Invented by David Rubinstein, Brookline, Mass. Assigned to Addressograph-Multigraph Corp., Wilmington, Del. Application February 21, 1936. Divided and new application August 23, 1938. 1 claim.

2,209,183. PRINTING PLATE ENGRAVING MACHINE characterized by novel electro-dynamic motor for reciprocating the pitting tool. Invented by Joseph A. Bennett, Bloomington, Ind. Assigned to Automatic Engraving Machine Co., Inc., Bloomington, Ind. Application April 3, 1937. 6 claims.

Printing Presses and Supplies:

2,205,391. METHOD AND APPARATUS FOR DRYING PRINTED INK ON A PAPER WEB. Invention includes novel features of heating the drying air, of circulation and recirculation of the air relative to the web for oxidizing the printed ink, and of recovering the volatile content of the circulated air. Invented by William H. Brunkow, Oak Park, Ill. Unassigned. Application March 8, 1937. 5 claims.

2,205,566. CONTROL FOR PRINTING PRESSES of the type wherein an impression cylinder is reciprocated across a stationary printing form by an electric motor. By providing positive connections between the terminal interrupters or reversing switches necessary in such controls and the resistance regulating the speed of the motor, the invention assures that the motor will be switched off or reversed at a position favorable to retardation and stopping of the impression cylinder carriage. Invented by Moriz Kollner, Leipzig, Germany. Unassigned. Application June 9, 1937, in Germany June 13, 1936. 8 claims.

2,205,720. LITHOGRAPHING PRESS of the type wherein the press cylinders are held in printing position by pneumatic pressure, the pneumatic system allowing quick manipulation of the press cylinders and eliminating necessity for frequent adjustment due to expansion and contraction of metal parts during temperature changes. Invented by George Goebel and Elbe A. Wilckens, Baltimore, Md. Assigned to Crown Cork & Seal Company, Inc., Baltimore, Md. Application October 1, 1936. 32 claims.

2,205,980. PRINTING MACHINE for use in combination with mechanism for applying a transparent cover of thermoplastic film to the printed web, to be used in printing wrappings for cigarette packages, etc. The invention provides means whereby the thermoplastic is heated for softening before application to the printed web, by the same heating means used to dry the ink. Invented by George M. Keller, Rochester, and Adolph M. Zuckerman, New York, N. Y. Assigned to R. Hoe & Co., Inc., East River & 138th St., New York, N. Y. Application May 12, 1937. 7 claims.

2,206,112. PERFORATING ATTACHMENT for presses or other sheet handling machines claimed to be capable of feeding sheets in a straight line regardless of imperfection of the stock, etc. Invented by Andrew Neuhart, West View, Pa. Assigned to Miller Printing Machinery Co., 1117 Reedsdale St., Pittsburgh, Pa. Application April 7, 1939. 5 claims.

2,206,186. ROTARY PRINTING PRESS wherein the circumference of the central portion of the cylinder is slightly greater than that of the ends, and the second cylinder is slightly larger than the first cylinder of unit. This arrangement is claimed to decrease causes of paper breakage. Invented by George Hantjopoulos, New York, N. Y. Unassigned. Application July 29, 1938. 6 claims.

2,206,269. INK FEEDING DEVICE for printing presses, wherein the several composition rollers required are all moved relative to their companion rollers by a single actuating means. Invented by Joseph Sinkovitz, Pittsburgh, Pa. Assigned to Miller Printing Machinery Co., 1117 Reedsdale St., Pittsburgh, Pa. Application April 1, 1937. 8 claims.

2,206,620. COMPENSATOR MECHANISM FOR MULTIPLE COLOR PRESSES. Invention is so designed that all of the different compensation on the press may be operated by a single control member. Invented by Arnold A. Schwartz, Plainfield, N. J. Assigned to Wood Newspaper Machinery Corp., 688 S. 2nd St., Plainfield, N. J. Application December 23, 1938. 7 claims.

2,206,841. CONTROL FOR PRINTING MACHINES claimed to prevent possible damage resulting from chokes occurring adjacent to the folding mechanism. The invention operates by detecting certain conditions before the choke occurs, and functions either to stop the machine or to interrupt feeding of product through the machine. Invented by Albert J. Horton, White Plains, N. Y. Assigned to R. Hoe & Co., Inc., East River & 138th St., New York, N. Y. Application January28, 1938. 22 claims.

2,206,879. OSCILLATING CYLINDER FLAT BED VARIABLE SHEET PRINTING PRESS including oscillating impression cylinders having gears meshing with racks on movable flat type beds. Cylinders are thrown on impression during the printing operation and off after the operation and during return strokes of the beds. The web is fed in and out during the taking of impression and stopped after the impressions are taken and during the non-impression strokes of the beds. Invented by Paul F. Cox, Chicago, Ill. Unassigned. Application March 27, 1939. 24 claims.

2,207,460. PRINTING PRESS, particularly for printing checks, or other work done on a platen press, and new inking mechanism therefor. Claimed to eliminate smearing and over- and under-inking, the inking mechanism is characterized by features which allow the inking rollers to change their direction of rotation at the end of each stroke or reciprocation. Invented by William Roy Hotchkiss, St. Paul, Minn. Unassigned. Application March 24, 1938. 9 claims.

2,207,785. IMPRESSION MECHANISM FOR ROTARY PHOTOGRAVURE PRESSES. Novel features of the invention include a motor-operated system for raising and lowering the back-up cylinder at either end, and normal means for raising and lowering the impression roller with the backup cylinder. Invented by Curtis S. Crafts, Oak Park, Ill. Assigned to The Goss Printing Press Co., 1535 So. Paulina St., Chicago, Ill. Application March 10, 1938. 16 claims.

2,207,999. TRANSPOSABLE PRINTER'S BLANKETS comprising a pair of blankets, each having a cork filler, and top and bottom faces of fabric, one blanket being relatively hard and the other more resilient. Invented by John W. Foster, Ridgewood, N. J. Assigned to Tingue Brown & Co., New York, N. Y. Application December 18, 1937. 5 claims.

2,208,043. OFFSET PRINTING MACHINE wherein the use of holding or gripping members is eliminated and "bleeding-off" operation made possible. The machine is particularly adapted for handling and printing envelopes, cards, etc. Invented by John J. Ormond, Boston, Mass. Assigned to Artographic Inc., Boston, Mass. Application November 13, 1939. 2 claims.

2,208,044. PRINTING MACHINE, particularly designed to handle envelopes, with special means for effecting high speed "bleeding-off" operation. Device operates without gripping members. Invented by John J. Ormond, Boston, and Paul H. Durup, Wollaston, Mass. Assigned to Artographic, Inc., Boston, Mass. Application May 13, 1939. 4 claims.

2,208,046. METHOD FOR EDGE-TO-EDGE PRINTING of envelopes, etc., giving particular attention to effecting suitable registration and obtaining adequate separation of the envelope from the printing members at high speed. Invented by Paul H. Durup, Wollaston, and John J. Ormond, Boston, Mass. Assigned to Artographic, Inc., Boston, Mass. Application July 11, 1939. 9 claims.

2,208,047. PRINTING ROLL for offset printing, particularly in the printing of envelopes, comprising a resilient body forming a smooth outer peripheral surface and provided with air passages for ventilation, and means for mounting on the printing roll. Invented by Paul H. Durup, Wollaston, Mass. Assigned to Artographic, Inc., Boston, Mass. Application January 29, 1938. New application November 13, 1939. 8 claims.

2,208,048. REGISTER MECHANISM for guiding envelopes, etc., between roller. The invention provides a guide plate mounted resiliently on one of the rolls, and mechanism both for depressing the guide plate and for extending throughout to maintain the forward edge of the envelope, etc., on the adjacent roll until it reaches the nip of the rolls. Invented by Paul H. Durup, Wollaston, Mass. Assigned to Artographic, Inc., Boston, Mass. Refiled for abandoned application January 10, 1938. New application November 13, 1939. 10 claims.

For Patent Research in the U. S. Patent Office, or a prompt estimate on any type of search, address INVENTION, INC., Barrister Bldg., Washington, D. C.

2,208,688. IMPRESSION MECHANISM FOR PRINTING PRESSES, particularly power plate presses for printing paper currency, etc., from engraved plates, designed in such a manner that the force of pressure applied between the printing elements is so taken up that no force is exerted on the frame. Invented by Burt D. Stevens, Golf, Ill. Assigned to Miehle Printing Press & Mfg. Co., 14th St. & South Damen Ave., Chicago, Ill. Application November 17, 1938. 8 claims

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STAR-JOURNAL

(*Continued from Page 24*)

high-speed Goss. The stereotyping department averages 3000 mats per month.

Engraving Department

Streamlined, continuous production flow is emphasized in the engraving department occupying 2500 sq. ft. on the third floor. This department is directed by Superintendent D. D. Curriden. A minimum of 12 men are employed here. Their work is made easier by modern equipment. All work comes into Mr. Curriden's office in an envelope and likewise departs in it to the proper department. That going to the composing room is sent down a chute with cut and original copy enclosed. All commercial work, of which there is a great deal, is enclosed in an envelope on which is listed in spaces provided for the purpose, cost of operation and the price to be charged. This leaves little chance for lost cuts or copy — twin bane of many newspaper offices. Incidentally, Mr. Curriden keeps extremely accurate rec-

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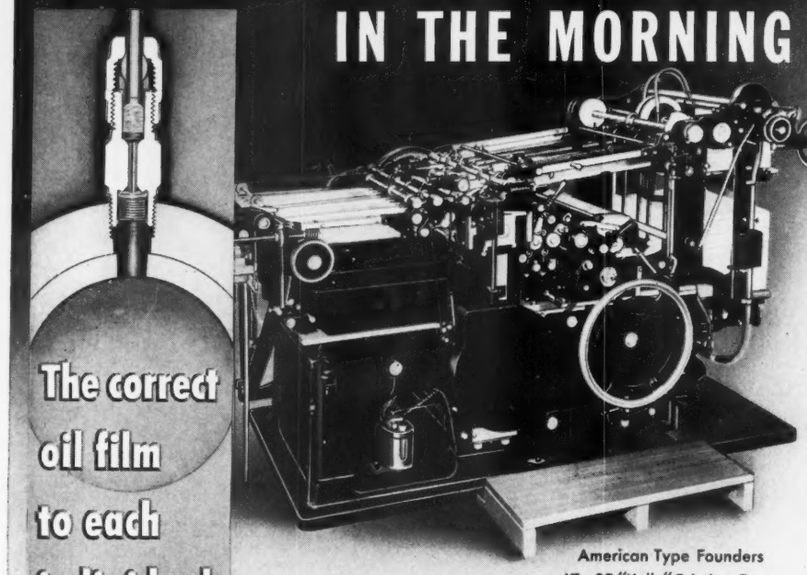

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ords of production costs on all work. The film method is used exclusively and cost-per-shot averaged 30½c in 1938 and is below that figure at present.

From Mr. Curriden's office copy goes to the camera room which is equipped with three cameras, two Chemcos and a Robertson. Three slide doors, one for each camera, provide routes for the work to move into three darkrooms, each equipped with sinks. Slide doors from the darkrooms lead to a stripping sink. Opposite sink is a three-man specially designed stripping table with tilt tops to accommodate the individual workers.

Also in the stripping and printing room are a Gaebel whirler, Douthitt vacuum printing frame, Pease arclight, 45 amp. overhead arc lamp, Wesel vacuum printing frame and an electric negative drying cabinet. There are two additional small sinks at the end of the room besides the main stripping sink.

Going through a door to the left, we leave the stripping room and enter the etching room where there are three etching machines — a Master, a Chemco and an Axel, with two sinks with acid-proof drain supplying both and giving direct egress to waste acid. The same drain system is used in the stripping and printing room. Across the room from the Chemco and Master etchers are spotting and Rolup tables with gas stove alongside. To the right of the spotting and Rolup tables are the powder box, a gas stove and cool roller.

At this point it might be mentioned that the dragons blood method is used for line jobs and the Rolup ink system for the halftones.

Progressing again to the left from the etching room we enter the room in which mechanical operations such as routing, blocking and trimming are done. In this room are the blocking bench, a saw and trimmer, two routers (one air-driver), jig saw, beveler and shears. Moving again to the left, we pass through a door and back into Mr. Curriden's office. We have followed the path an engraving job would have taken and have come back to the starting point without once backtracking.

And now for a few statistics on Mr. Curriden's department. A total of 35,000 separate negatives are handled annually on an average of 12 hours per day of operation. Most of these are ordinary halftones one of which can be turned out in 25 min. from the time the copy arrives. The average on cuts is nearly 250 a day. Consumption of zinc is about 5000 sheets a year.

Mr. Curriden's department turns out a considerable volume of fine commercial work despite that fact that it is produced in a plant beset by the hurry-up of fast newspaper production.

The arrangement of the third floor follows the streamlining in evidence on other floors. Adjacent to the engraving department are the editorial department and executive offices from which news photo copy is dispatched to the engraving room and the photographers' studio where local news photo copy originates.

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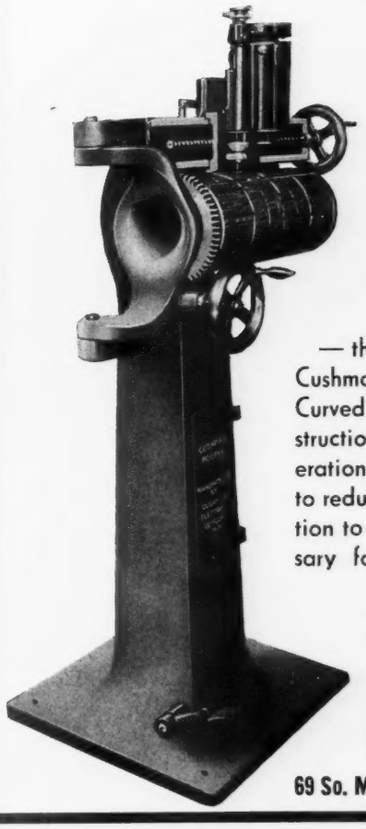

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San Francisco District Manager

The Ludlow Typograph Company announces the appointment of Wesley Lantis as manager of its San Francisco district office.

Mr. Lantis was educated in the schools of Oakland, Calif. His printing experience includes service as mechanical executive of a newspaper and commercial printing plant, and several years in printing plant management. He has a wide acquaintance among members of mechanical staffs and business office executives, and is respected because of his accurate knowledge of what these men must meet every day in plant operation.

Ludlow's San Francisco District office is now supervised by Wesley Lantis.

CRAFTSMEN

(*Continued from Page 15*)

more brittle it is. In conclusion, the speaker pointed out that in the total cost of a book the cost of adhesives is very small, and that it is very unwise to cut this cost by sacrificing quality in adhesives.

Laminating Processes

Paul Worden, of San Francisco, spoke on the subject of *Lamination*. He stated that lamination was not the mystery some people seem to think it is. It is the combining of two or more materials in an endless web.

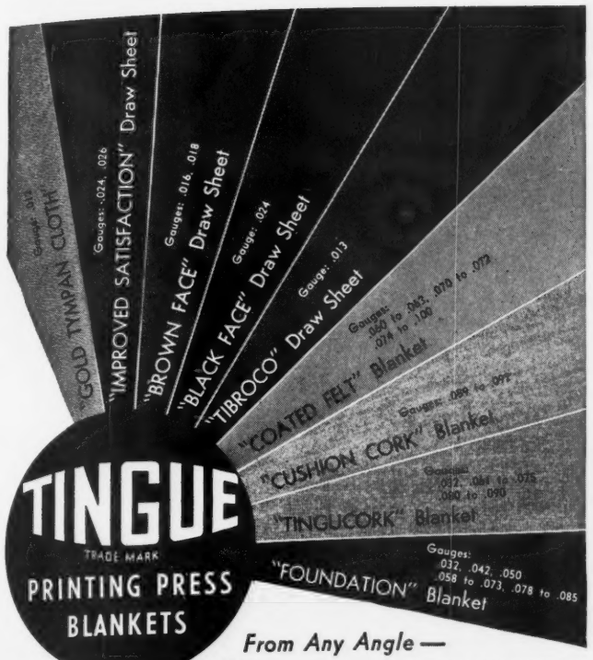
There are, of course, many types of laminating being done. In the packaging field a great deal of glassine is used because of its grease resisting properties. Laminated boards are also being used to some extent for book covers.

Most eastern mills have equipment to laminate their own product, and as a result a good many standard items have been developed. The Pacific coast cannot compete with these standard items. However, there are lots of applications for lamination in special items. It must be borne in mind that because of the nature of the process there are minimum quantities which must be ordered. The speaker showed an example of a cover for a wall paper catalog which had been made by laminating two sheets of kraft, in order to get great strength.

To laminate a sheet of cellophane to another stock in an endless web is an almost impossible job, because the expansion and contraction of the materials cause wrinkles. The speaker stated that his attempts to coat the paper with cellulose had been hampered by lack of proper equipment. He expressed the hope that such equipment would be developed. However, a cellulose solution can be sprayed successfully, but there is a wastage of 50% of the spray solution, which increases the cost of this method, and because of the cost its commercial application has been rather limited.

Folding Machines

Walter B. Reich spoke on folding machines. Judging from drawings for early patents for folding machines they were pretty fantastic, looking like the brain children of Rube Goldberg. The first practical machines were of the roller type, with a knife and register pins for use in holes which had been made when the sheet was printed. This was neces-



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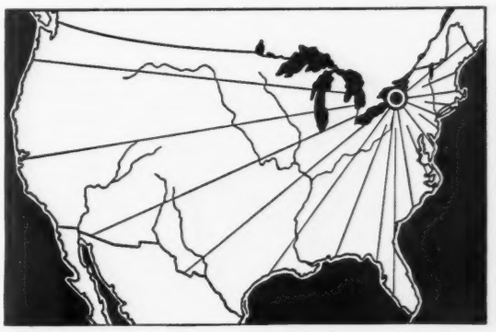

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For dependable stereotyping, rely on Certified Mats, made in the U. S. A.

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sary because of the innacuracies in the trimmed size of the sheet. The next development was the tape and knife machine which was used exclusively until about 1912, at which time the loop or buckle type of folder was developed. This style of machine gained immediate popularity because of its simplicity. There have been no basic changes since that time. However, the machines of both types have been greatly improved.

The speaker observed that a great many people could not understand why there were both book and news impositions. The reason for this was that when done by hand the book fold is an easier operation than the news fold. When the first book folders were developed not all folding was done by machine, and the stone hands did not wish to have two impositions, one for machine and one for hand, and the custom has carried down to the present.

The tape and knife machine is still faster for certain types of book work than the loop folder. The advent of the loop folder opened up new fields for the printer in the production of advertising material in particular. The tape and knife machines had been almost entirely right angle folders, whereas the loop folders were capable of all styles of combinations of parallel and right angle folds.

The size of folding machines has been largely determined by the development of press sizes. Special folders and attachments have been developed to meet the needs of the industry. An example of this development of machines to handle the complicated folding required by automobile road maps.

Classes of plants fall into four classifications. Bookbinders doing book work use tape and knife folders. Magazine binders use special equipment, double deck machines which will handle inserting and outserting, also machines which will handle three sheets at a time, for the distribution of color sheets throughout a magazine. General binders use both the loop and the knife types, and binders doing job work use the small high speed machines.

Manufacturers are always alert to listen to suggestions as to how their products can be improved, and new models incorporate ideas received from operators of the equipment.

NEW DEVELOPMENTS CLINIC

Typographic Progress

Perhaps one of the most interesting meetings of the entire program was the *New Developments Clinic held on Wednesday afternoon.* At this meeting Editor J. L. Frazier of *The Inland Printer* presided as Chairman. He was assisted by Mac Sinclair, editor of *Printing Equipment Engineer*.

In opening the meeting, Mr. Frazier exhibited a number of advertisements ranging from the period of 1847 in America to the present day. He talked entertainingly about the trends in typographic style and layout. Mr. Frazier's discussion demonstrated that development in typography has taken place importantly just the same as in the case of equipment design and in the development of new processes.

Leadless Typesetting

Chairman Frazier then introduced Mac Sinclair, editor of *Printing Equipment Engineer*, who discussed *Photographic Typesetting Developments*. The subject covered variable spacing typewriters used in offset-lith plate making and some of the more prominent leadless composing machines which have been announced at various times.

The discussion on typewriters covered the Toman Marginal Aligner, the Composograph, the I. B. M. differential spacing machine and the Varityper.

The Orotype, the Friedman-Bloom machine, the Uhertype and the Westover method recently patented in England were also discussed.

Speaking from the printer's standpoint, there is some confusion between the terms "photo-composing" machines as applied to photo-typesetting and the use of the same term for a machine when used to impose the units in a form during plate-making operations. It has already been explained by several that the offset-lithographer's photo-composing machine has been so named because, in principle, it is used somewhat after the manner of the artist's technique in planning the composition of a picture. To

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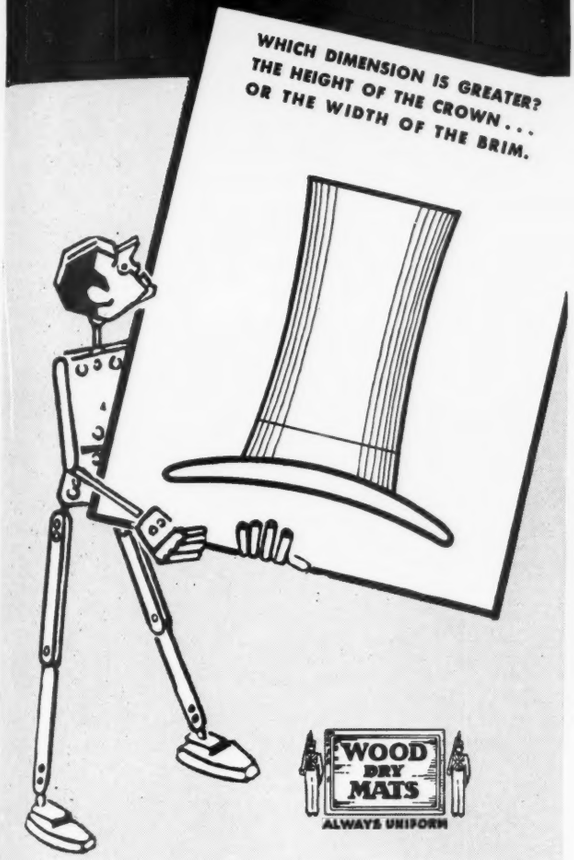

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WOOD FLONG CORPORATION
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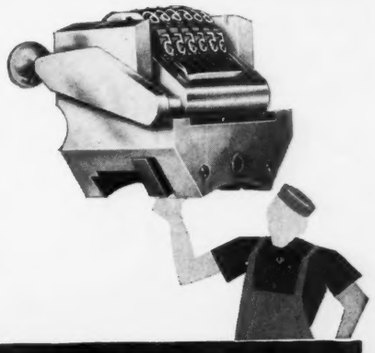
Number Better

Locking time is reduced and fine adjustment is facilitated by exclusive features of Wetter Rotary Numbering Machines. Interchangeable, too, for right angle or parallel operation. Deeply engraved figures, accurately turned to cylinder sizes, insure better work.



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SIXTH
PRODUCTION
YEAR BOOK

A world of technical and production information in compact form divided as follows: Art and Photography, Engravings and Electrotyping, Bookmaking and Binding, Paper and Ink, Printing Processes, Production Data, Typography and Cross-Index.

The 1940 edition consists of 612 pages, of which four out of five are illustrated — book averages two and one-half illustrations per page. Size 8¾ inches by 11¼ inches.

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(Handling margin makes it necessary that price of books accompany all orders)

Printing Equipment Engineer
1276 West Third Street, Cleveland, Ohio

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"FLECTO" GUMMED BACKING FELT — CUT STRIPS OR SHEETS
"PLATE-TAK" — DOUBLE FACED ADHESIVE TAPE FOR MOUNTING CUTS

CORK MOLDING BLANKETS
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AUTOPLATE BELTS
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Write for New General Catalog Today!

EASTERN NEWSPAPER SUPPLY — 9603 NORTHERN BLVD., CORONA, N. Y.

adhere to traditional printing plant usage, it would seem that the photo-composing machine as used for assembling the various elements or units in a plate could very well be termed a photo-imposing machine, in addition to the alternative name of "step and repeat" machine.

From a strictly printing standpoint, type reproduction by means of typewriters can never be substituted universally for the present type making methods.

Bringing the experimental and developmental work related to photo-typesetting machines down to the present, we now have been informed that George Westover, sales manager of London's Monotype Corporation, has filed patent papers in England.

From meager information obtainable at this time, the machine apparently is an adaptation of the Monotype typesetting machine. In place of the matrices in the usual die case, a plate is affixed in the case, so that the images of the letters are substituted for matrices. When the desired letter is in proper position before the camera a photograph of the letter is taken on a film. The roll of controller paper produced at the keyboard may be used either to operate the typecaster as we know it, or to operate the photo-composing machine.

The product is a strip film on which have been photographed lines of characters of the selected or pre-determined point size. One set of images in the die case is required for all sizes of type composition. The photographic image of the letters is reduced to the point size required.

The photo-typesetting machine still is in the laboratory stage. So far as is known, there isn't a single photo-typesetting machine in operation in the United States. There isn't any doubt but what photo-typesetting will be developed in the future. Up to date, it seems that none of those machines which have been developed can be operated to produce type matter at similar or less cost than our present method of making type.

The engineering problems associated with the development of photo-typesetting machines are tremendous. When one considers that such a machine must be capable of producing type matter in volume, that the type elements must be reproduced in innumerable sizes, that they are of variable width, must align perfectly and must be set to arbitrary line widths with proper word and letter spacing, the problem yet seems insurmountable when viewed in the light of present type composition production costs.

S. H. Hazleton of General Electric's Lamp Department, San Francisco, discussed *Fluorescent Lighting in Printing Plants*. Mr. Hazleton kept his audience intensely interested during his discussion of several new lamps some of which were developed specifically for printing plant needs. Since a number of articles have appeared from time to time in *Printing Equipment Engineer* about the fluorescent lamps, the camera copyboard lamps, the high-pressure mercury H6 lamp and others, we will conclude mention of Mr. Hazleton's address by saying that he is an excellent speaker, knows lighting thoroughly and made everyone present feel that they had learned something about lighting developments.

Ralph H. James, San Francisco silk specialist, discussed the silk screen process. He demonstrated the fundamentals of the process by showing how a stencil is produced, transferred to the printing frame, how the ink is applied to the screen and the use of the squeegee to put the paint or "ink" upon the paper or cardboard.

Production Manager A. L. Lengel of the Oakland (Calif.) *Tribune*, discussed the *Alltone Newspaper Plate* and how it is produced. His address created great interest after the meeting when a number of Craftsmen present requested further details.

Mr. Lengel also discussed his most recent development upon which he has been granted a patent, whereby newspaper color printing may be produced through the chemical reaction of specially compounded inks which react or change their color according to the ph value of the paper upon which they are to be printed. The first down color takes advantage of the ph value of the paper; the second color will be produced according to the reaction produced when the second color comes in contact with the first down color. Multiple colors can be produced from two plates without the using an entire press, or in other words, without using a separate unit for each of the colors which are to appear in the picture.

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Price is so low you can't afford to be without it . . .
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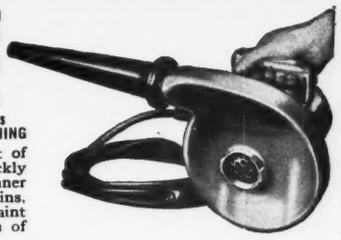

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Write for information and FREE TRIAL OFFER

STOP OFFSET

Get your free copy of this new bulletin—"10 Ways to Avoid Offset." Valuable—practical—shows how to save money—improve presswork.

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HIGH GRADE BLACKS AND PROCESS COLORS

WILLIAM C. HERRICK INK CO.
330 West 34 St., New York, N.Y.

Circular on New Cabinet Model

FREE *Rouse* BAND SAW

See the No. 2 Rouse Band Saw for smaller plants.

H. B. ROUSE & CO.
2216 N. Wayne Ave., Chicago, Ill.

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FOR SALE—4x4 PMCo Aluminum Bases at 60c each and Regular hooks at 50c each; all in good condition. Box 300, Printing Equipment Engineer, 1276 W. 3d St., Cleveland.

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FOR SALE—Wesel Final Beds, sections: 4—13x16½; 1—20x29; and 1—21½x29; 300 good hooks. Box 302, Printing Equipment Engineer, 1276 W. 3d St., Cleveland.

WARNOCK BASE Cuts Cost
Send for Catalog
W. S. Warnock Co.
1524 Jonquil Terrace
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GENERAL REPAIR OF LINOTYPE AND INTERTYPE MOLDS (ANY KIND, ANY SIZE). PARTS, ETC., SINCE 1912
Makers of Reid Magazine Racks, Etc.
WILLIAM REID & CO., 2271 Clybourn Ave., Chicago, Ill.

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PRESS DRIVES and CONTROL
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Semi-Cylindrical • Unitubular
Tubular • High Speed Flat Bed
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Rochester Printing Education Conference

THE 19th Annual Conference on Printing Education, held at the Rochester Athenaeum and Mechanics Institute, Rochester, New York, brought together more than 200 teachers of printing and school and printing executives from all parts of the United States and Canada. The conference was sponsored by the National Graphic Arts Education Association, and the local hosts were the Department of Publishing and Printing of the Rochester Athenaeum and Mechanics Institute — Rochester Typothetae, Rochester Club of Printing House Craftsmen, and Rochester Public Schools.

The program featured the 500th Anniversary of the Invention of Printing and clinical sessions on teaching problems in the various types of schools offering printing instruction.

The banquet was an exceptionally brilliant affair, with Harry L. Gage, Vice President of Mergenthaler Linotype Company, as toastmaster. Speakers were Frank J. Smith, of John P. Smith Company, Rochester; T. G. McGrew, field secretary, United Typothetae of America, and Leroy Snyder of the Gannett Newspapers, Rochester. Another featured speaker at the banquet was Thomas Roy Jones, president of the American Type Founders.

Some of the industry speakers at the regular conference sessions were: Charles F. Mosher, president of Rochester Typothetae, Inc.; William C. Lennox, president, Rochester Club of Printing House Craftsmen; Howard N. King, typographer, The Intertype Corporation, Brooklyn, N. Y.; John M. Collins, engineer, American Type Founders, Elizabeth, N. J.; C. R. Spicher, The Miehle Printing Press & Machinery Co., Chicago, Ill.

At a business meeting it was voted to change the name of the organization from the National Graphic Arts Education *Guild* to the National Graphic Arts Education *Association*. A vote of thanks was extended to R. Randolph Karch of the R.A.M.I., local Conference chairman, who is now principal of the Printing Vocational High School in Cincinnati.

The newly elected officers are: President, Chester A. Lyle, Timken Vocational High School, Canton, Ohio; Vice President, Hupp E. Otto, McKinley Trade School, Wheeling, W. Va.; Secretary, R. Randolph Karch, Printing Vocational High School, Cincinnati, Ohio; and Treasurer, E. S. French, Woodrow Wilson High School, Washington, D. C.

The directors are the officers and the following: Harold G. Crankshaw, Central High School, Washington, D. C.; J. Henry Holloway, The New York School of Printing; C. Harold Lauck, The Washington & Lee University, Lexington, Virginia; Allan Robinson, Ottmar Mergenthaler School of Printing, Baltimore, Md.; Ferdy J. Tagle, The New York School of Printing; and John A. Backus, American Type Founders, Elizabeth, N. J.; and Harry L. Gage, Mergenthaler Linotype Company, Brooklyn, N. Y. Sixteen regional vice presidents were elected also. Fred J. Hartman is the educational director, with headquarters at 719 Fifteenth Street, N. W., Washington, D. C.

The next convention will be held at Cleveland, Ohio, the latter part of June 1941.

Improved Rotary Union

A new improved rotary union for use wherever a gas or liquid line must be connected to a revolving shaft, roll or drum has just been developed by Perfecting Service Corporation.

According to the announcement, this improved rotary union embodies low friction performance and is designed for web-driven rollers such as are used in printing presses and for other types of machines. This low friction feature makes mechanical drives unnecessary, it is stated.

Recent improvements, it is stated, provide for two types of unions — the standard union for use on water and steam up to 50 lbs. pressure, and the heavy duty union for use on pressures over 50 lbs.

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Circle the numbers on the convenient postage-paid return card, supply your name, title and company address and mail — we do the rest. Manufacturer or supplier will send you information or literature about equipment or supplies advertised in this issue. This card saves you time and postage — Keep informed — No obligation.

Composing Room

1 CUT CEMENT—"Booth's Zink Cut Cement holds with the grip of a Tiger's paw — saves time in the composing room." Let the E. A. Booth Rubber Company send you full information. Circle this number on the coupon.

2 DETAILS AND SPECIMENS of Ludlow typefaces will gladly be sent you by The Ludlow Typograph Company. Learn more about Ludlow equipment.

3 DETAILS on New Universal Intertype are offered by the Intertype Corporation. Check up on this new typesetting machine. No obligation, just fill out the card.

4 SAW TRIMMER—"C&G Saw Trimmers increase production and reduce costs materially." Milwaukee Saw Trimmer Corporation this month offers to mail you illustrated literature. Use the postage-paid return card.

5 MOTOR & ROUTER — Cushman Electric Co. will send illustrated booklet showing features of its Offset Motors for Linotype and Intertype drives. Circle this number on the coupon.

6 MOLD COOLER—Linotype Parts Company this month offers a detailed circular on its Model B Blower. Check the features of this equipment for Linotype and Intertype.

7 REPLACEMENT PARTS for Linotypes and Intertypes. Use the postage-paid return card to get free catalog of parts, material and repairs. Offered by Montgomery and Bacon.

8 SAW — "1100 plants have discovered that the Glider obsoletes all others — cuts sawing time one-third." Hammond Machinery offers full description and prices in interesting booklet. Send for it. Just circle this number on the post-card.

9 TYPE METAL—Imperial Type Metal Company this month offers interesting facts on its "Plus Plan". Send for booklet.

10 PROOF PRESS—Vandercook & Sons will be glad to send you details on its new and rebuilt proof presses. No obligation, just fill out the coupon and mail.

11 COMPOSING ROOM SAW — New Hammond Mercury "has what it takes." Hammond also features popular priced Bench Mercury. Coupon brings you free complete literature. Learn more about these saws.

12 QUOIN—Challenge Machinery Company offers to mail you full details on its Hi-Speed Quoins. Use the Post Card. No obligation.

Pressroom

13 NUMBERING MACHINES—Wetter Numbering Machine Company wants to send you full details and description of its machines for use on Rotary and flat bed presses. Circle this number on the coupon.

14 PAPER—"To get the most out of your printing, investigate Champion Paper, the foundation for good printing." Champion Paper & Fibre Co. offers information on its complete line of papers. Gratis.

15 OFFSET PRESS — "To produce the best in Offset, you must have modern equipment." Harris-Seybold-Potter Co. offers interesting reading matter on its press — also information on Harris Litho chemicals.

16 INK — "Zephyr Blacks, for flatbed presses, are favorites across the nation. Drying speed is amazing." Sinclair & Valentine offers descriptive folder. Send for it.

17 PRESS — ATF "Little Giant" press sheet and details on this press will be mailed to you. Just circle this number on the post-card.

PLEASE FILL OUT THIS CARD CAREFULLY

PRINTING EQUIPMENT Engineer — August
1276 West Third Street, Cleveland, Ohio.

Without obligation please have the manufacturers send me literature or information circled below. (These numbers correspond to numbers on descriptive paragraphs).

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18
19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34

NAME .....TITLE .....DEPT. .....

FIRM NAME .....

STREET .....CITY .....STATE .....

Use this Free Service—Keep up-to-date on Equipment and Supplies

18 OFFSET EQUIPMENT — Let American Type Founders send you details on its complete line of Offset equipment. "From the darkroom to the pressroom." No obligation.

19 OFFSET GUN — ATF offers complete information on its improved Gun.

20 LUBRICATION—"Insure better work and more of it—with Bijur "metered" lubrication on your presses." Bijur offers to send information on its system.

21 PRINTING PRESS BLANKETS — Tingue, Brown & Company enumerate the various kinds of press blankets supplied by them. Prices and samples will be sent to you. No obligation.

22 PRESS—Brandtjen-Kluge offers interesting booklet which explains in detail the "Rigid Impression" of the Kluge Automatic Press.

23 LUBRICATION — "There is a Blanchard Pulsator System for lubricating every type and size of printing press." Bulletin B-30 will be mailed to you promptly.

Stereotype Dept.

24 STEREOTYPE SUPPLIES — Eastern Newspaper Supply offers to send you latest complete catalog of supplies. Learn more about "Flecto" Gummed backing felt, "Plate-Tak" Cut Mounting Tape, and "Tru-Mold" Cork Molding Blanket. Gratis.

25 DRY MAT — Burgess states, "The ability of the stereotyper shows to best advantage when he uses Burgess Chrome Mats." Circle this number on the coupon to get samples and booklet describing Burgess Mats.

26 CATALOG of supplies for the printer will be mailed to you by American Publishers Supply. Contains many useful products used daily in stereotype departments. Coupon brings it to you.

27 DRY MATS — Wood Flong offers sample lot of its dry mats. "Wood Mats give white highlights—solid blacks—true halftones and middletones — deep molds — clean plates."

28 MASTER FORMER —"Mechanize your dry mat shrinkage with automatic Vacuum control." Sta-Hi Corporation offers to mail you booklet describing the Sta-Hi Master Former. Coupon brings it to you.

29 MAT CASTER — "For better plates and faster casting, investigate the Hammond Easykaster "8", equipped with or without 800 pound valve-controlled melting pot." Literature, prices and terms offered by Hammond Machinery Builders, Inc. No obligation, just fill out the coupon.

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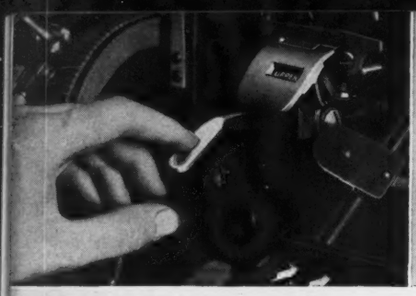
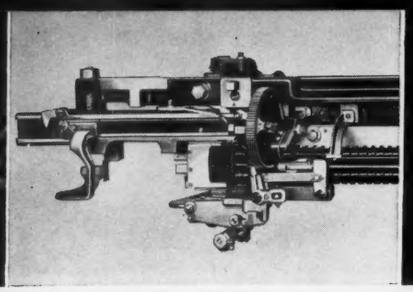
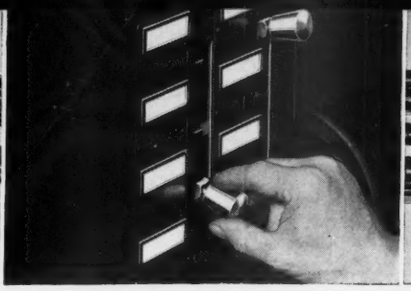


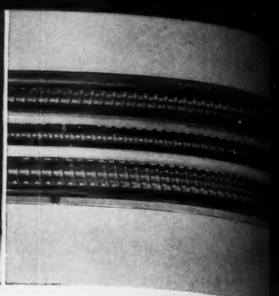
Finger-flip magazine changes (mixers and *non-mixers*)



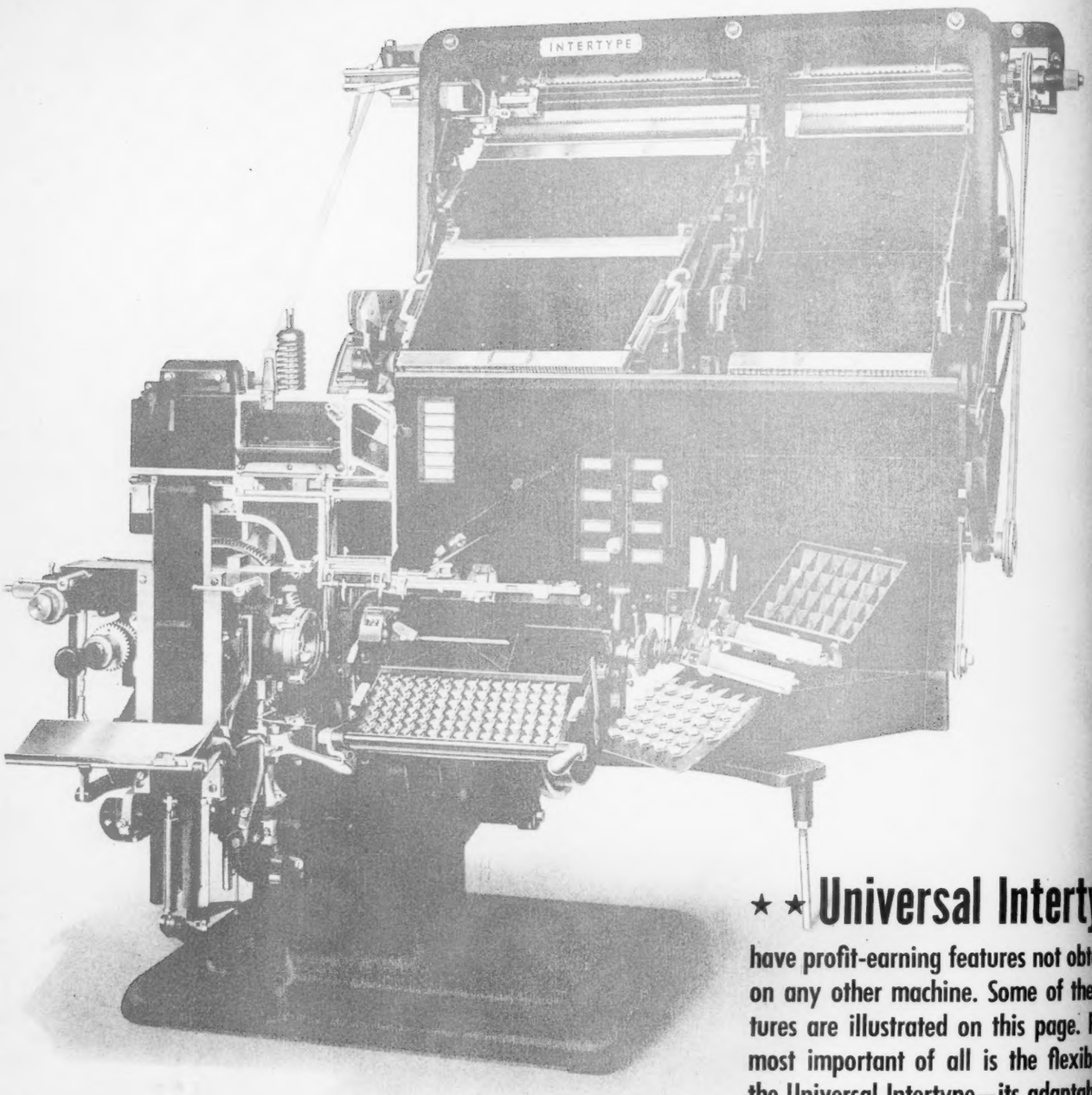
Non-mixers convertible into mixers, and vice versa



Power-operated magazine shift is a great time-saver



Time-saving twin distribut… (mixers and *non-mixers*)



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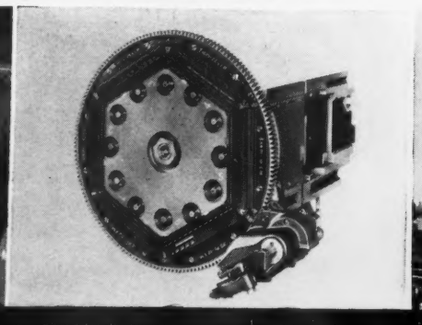
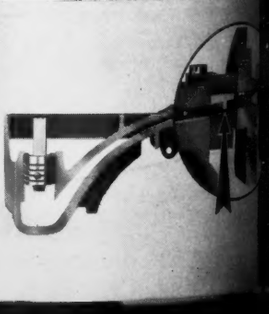


61 combinations of equipment to meet all requirements

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